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HAZARDOUS
SITE CONTROL
DIVISION

Remedial Planning/ Field Investigation Team (REM/FIT)

ZONE II

CONTRACT NO.
68-01-6692

CH2M HILL

Ecology & Environment

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DRAFT
SAN GABRIEL
SUPPLEMENTAL SAMPLING PROGRAM
REPORT

VOLUMES 2 and 3 - APPENDIXES

SAN GABRIEL BASIN
LOS ANGELES, CA

WA 105.9L27.1

May 19, 1986

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VOLUME 2 of 3 - APPENDIX A
HYDROGEOLOGIC EVALUATION

SAN GABRIEL BASIN
LOS ANGELES, CA

WA 105.9L27.1

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APPENDIX A
HYDROGEOLOGIC EVALUATION

A.1 INTRODUCTION

This appendix presents the results of a hydrogeologic evaluation of the San Gabriel Basin performed by CH2M HILL. Groundwater movement is considered to be the primary mechanism of contaminant transport in the basin; therefore, it is important to understand the physical conditions and processes affecting the rate and direction of groundwater movement, which in turn influence the rate and direction of contaminant migration. This appendix presents a discussion of the hydrogeology and groundwater flow conditions in the San Gabriel Basin based on available information.

The main body of the Supplemental Sampling Program (SSP) report draws heavily on the findings and analyses presented in this appendix. The main body of the SSP report provides the results of analyses and significant findings of the SSP investigation. This appendix provides the details of the methodologies and analyses employed in the hydrogeologic evaluation. It also provides a comprehensive summary of the basis of the hydrologic evaluations, so that if errors or omissions exist in the information used for the investigation, they can be identified and taken into consideration in the Remedial Investigation/Feasibility Study (RI/FS) being conducted for the San Gabriel Basin.

A.1.1 PURPOSE

The results of the hydrogeologic evaluation of the San Gabriel Basin will provide input to the contaminant source investigation studies and the RI/FS. Specifically, the hydrogeologic evaluation is intended to provide the following:

- A comprehensive data base on the hydrology of the basin
- A conceptual model of the basin which identifies the physical conditions and processes controlling groundwater movement
- A planning tool, i.e., a groundwater flow model, which can be used in the RI/FS to focus field data collection activities and to provide input to the evaluation of proposed remedial alternatives
- An identification of potential source areas of groundwater contamination
- An identification of potential high problem areas, i.e., areas which may be affected by further migration of contaminants

The results of the hydrogeologic evaluation provide input necessary to analyze the no-action and surface water supply alternatives. The no-action alternative involves an identification and evaluation of potential effects associated with taking no action to address the groundwater contamination in the San Gabriel Basin. The surface water supply alternative involves an assessment of the feasibility of replacing the existing contaminated and potentially contaminated groundwater with a surface water supply.

A.1.2 SCOPE

The scope of the hydrogeologic evaluation involves the following:

- Compilation and review of available reports and information on the hydrology of the San Gabriel Basin which is available from public agencies such as the California Department of Water Resources, California Department of Health Services, California Regional Water Quality Control Board, Los Angeles County Health Department, Los Angeles Department of Public Works (formerly Los Angeles County Flood Control District), and the Main San Gabriel Basin Watermaster

- Development of a conceptual model of the hydrogeology of the basin which describes the physical conditions (such as geology, topography, and physiography) and important hydrologic processes influencing groundwater flow

- Development of a three-dimensional digital computer model which can be used for assessing data deficiencies, evaluating groundwater movement (and therefore potential contaminant migration), focusing planning activities for the RI/FS, and providing a foundation for further hydrologic analyses during the RI/FS

- Evaluation regarding potential source areas of contamination based on results of groundwater flow simulations and existing hydrogeologic data

- Evaluation of the continued migration of contaminants based on results of groundwater flow simulations and existing hydrogeologic data

The hydrogeologic evaluation phase of the SSP is not intended to provide a detailed analysis of contaminant transport in the basin. Contaminant migration is expected to be controlled dominantly by advection due to groundwater flow; therefore, the emphasis of this stage of the San Gabriel investigation has been placed on understanding the hydrogeologic and groundwater conditions. It is expected that as the RI/FS proceeds more attention will be given to furthering the understanding of the factors controlling contaminant dispersion, retardation and attenuation. An understanding of these latter factors, as regards their significance in the San Gabriel Basin, is beyond the scope of the present investigation; and therefore, they are not addressed.

A.1.3 ORGANIZATION OF APPENDIX

This appendix is organized into the following sections: Regional Hydrogeology, Hydrogeologic Properties, Groundwater Budget, and Numerical Model Analysis. The section on regional hydrogeology describes the regional geology and hydrogeology of the San Gabriel Basin and identifies the major features of the basin, including the boundaries of the area of study. The water storage and transmitting properties of the water bearing units are evaluated and characterized in the section on hydrogeologic properties. The groundwater budget, defining inflow to, and outflow from the groundwater basin is discussed in the third section. The numerical model analysis section includes two- and three-dimensional modeling analyses, a discussion of the groundwater flow simulations, including sensitivity analyses, and a discussion of applications of the modeling results.

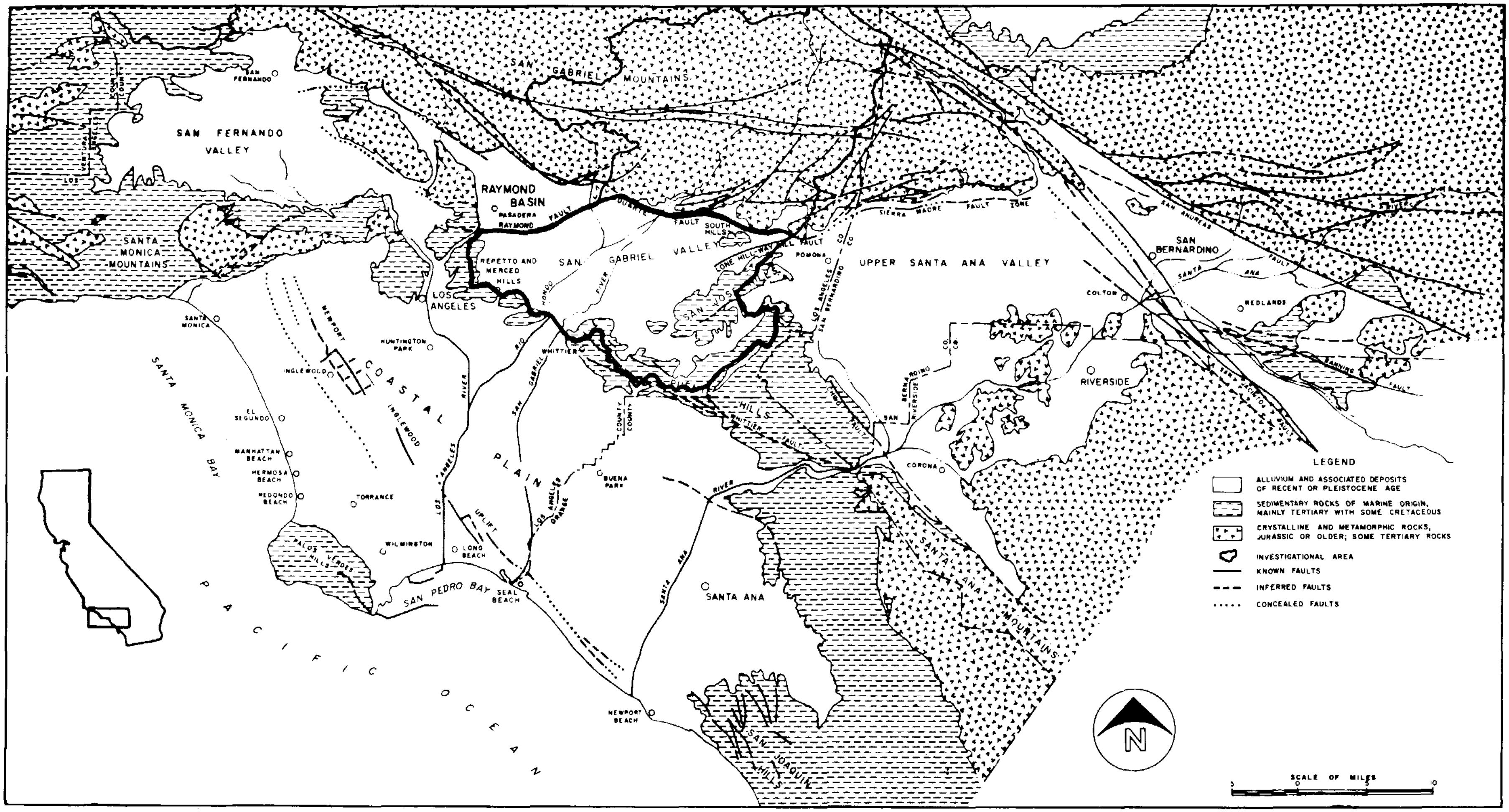
A.2 REGIONAL HYDROGEOLOGY

The purpose of this chapter is to provide the background information which was used to define the limits of the study area and focus the hydrogeologic evaluation of the San Gabriel Basin. The discussion includes a brief description of the following: physiography, climate, geology, and groundwater occurrence and movement. These descriptions are based on previously published information, primarily reports prepared by the California Department of Water Resources (CDWR) and the Los Angeles County Department of Public Works (more specifically, the former Los Angeles County Flood Control District, LACFCD).

The single most comprehensive document describing the hydrogeology of the San Gabriel Basin has been published by the CDWR: Planned Utilization of Groundwater Basins, San Gabriel Valley, Appendix A: Geohydrology, Bulletin No. 104-2. Although this report was published in 1966, it is still the primary reference on the hydrology of the basin as shown through numerous discussions with various state and local agency personnel working in the basin. Therefore, Bulletin No. 104-2, and supporting documentation on file at the CDWR, has been utilized extensively in the work presented in this appendix.

A.2.1 PHYSIOGRAPHY

The San Gabriel Basin is located in the eastern portion of Los Angeles County (Figure A-1). The San Gabriel Basin, as it is called throughout this report, is the "San Gabriel Valley Groundwater Basin" as defined by the CDWR (1966). The CDWR defines the boundaries of the basin as follows: The Raymond fault on the northwest, the line of contact between the alluvium and the bedrock of the San Gabriel Mountains on the north, the bedrock high between San Dimas



SOURCE: CDWR, 1966

FIGURE A-1
LOCATION AND GENERAL GEOLOGY OF AREA OF INVESTIGATION
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

and La Verne on the east and the line of contact between alluvium and the bedrock of the low hills on the southern periphery of the basin. Bedrock areas occurring within the area of the described boundary are excluded from the basin.

The San Gabriel Mountains lie north of the San Gabriel Basin. These mountains range in elevation from 900 feet at the base to over 10,000 feet above sea level. The mountains are composed primarily of igneous and metamorphic rocks. They are characterized by steep, rocky ridges which are broken by numerous irregular canyons.

A system of low rolling hills lies along the southern extent of the San Gabriel Basin. These hills, from west to east, include: the Repetto, Merced, Puente, and San Jose Hills (Figure A-1). These hills rise approximately 500 feet above the floor of the San Gabriel Basin. Whittier Narrows, a floodplain 1-1/2 miles wide, forms a gap in the southwestern portion of the hills, between the Merced and Puente Hills.

The San Gabriel Basin is a broad piedmont plain which slopes from the San Gabriel Mountains toward Whittier Narrows. The average slope of the valley floor in the basin is about 65 feet per mile (CDWR, 1966).

The San Gabriel Basin receives runoff from the surrounding basins, the San Gabriel Mountains, and the periphery hills. The major outflow is through Whittier Narrows by either the Rio Hondo or San Gabriel River. Minor outflow does occur by the Arroyo Seco. Except for the Arroyo Seco, all other drainages in the basin converge on the Rio Hondo or San Gabriel River. The larger drainages, from east to west, include: Walnut Creek, San Dimas Wash, Big Dalton Wash, Little Dalton Wash, San Jose Creek, Sawpit Wash, Big Santa Anita Wash, Little Santa Anita Wash, Arcadia Wash, Eaton Wash, and Alhambra Wash. These drainages are all characterized as intermittent streams. The drainages of the basin have been improved with concrete-lined bottoms and sides, except for the San Gabriel River and a portion of Rio Hondo near Whittier Narrows. Most of the channel bottom of the San Gabriel River has been left pervious in order to allow water to percolate and replenish the groundwater supply.

A.2.2 CLIMATE

The climate of the San Gabriel Basin is considered subtropical to semiarid. About 77 percent of the annual precipitation occurs during December through March. Precipitation varies with elevation. Precipitation averaged 27 inches on the frontal area of the San Gabriel Mountains and an average of 18 inches over the valley floor, during the period 1933 through 1960. Based on rainfall data presented by LACFCD (1982), the average annual rainfall for the period 1947 to 1977 was about 20 inches at the Glendora station, which is located in the northeastern part of the basin. This compares with approximately 21 inches found by CDWR (1966) at Glendora for the period 1933 through 1960.

Temperatures in the valley are usually moderate. The average annual temperature in the basin is about 62 degrees Farenheit (CDWR, 1966). Temperatures rarely drop below freezing. The summer months may occasionally bring temperatures above 100 degrees Farenheit.

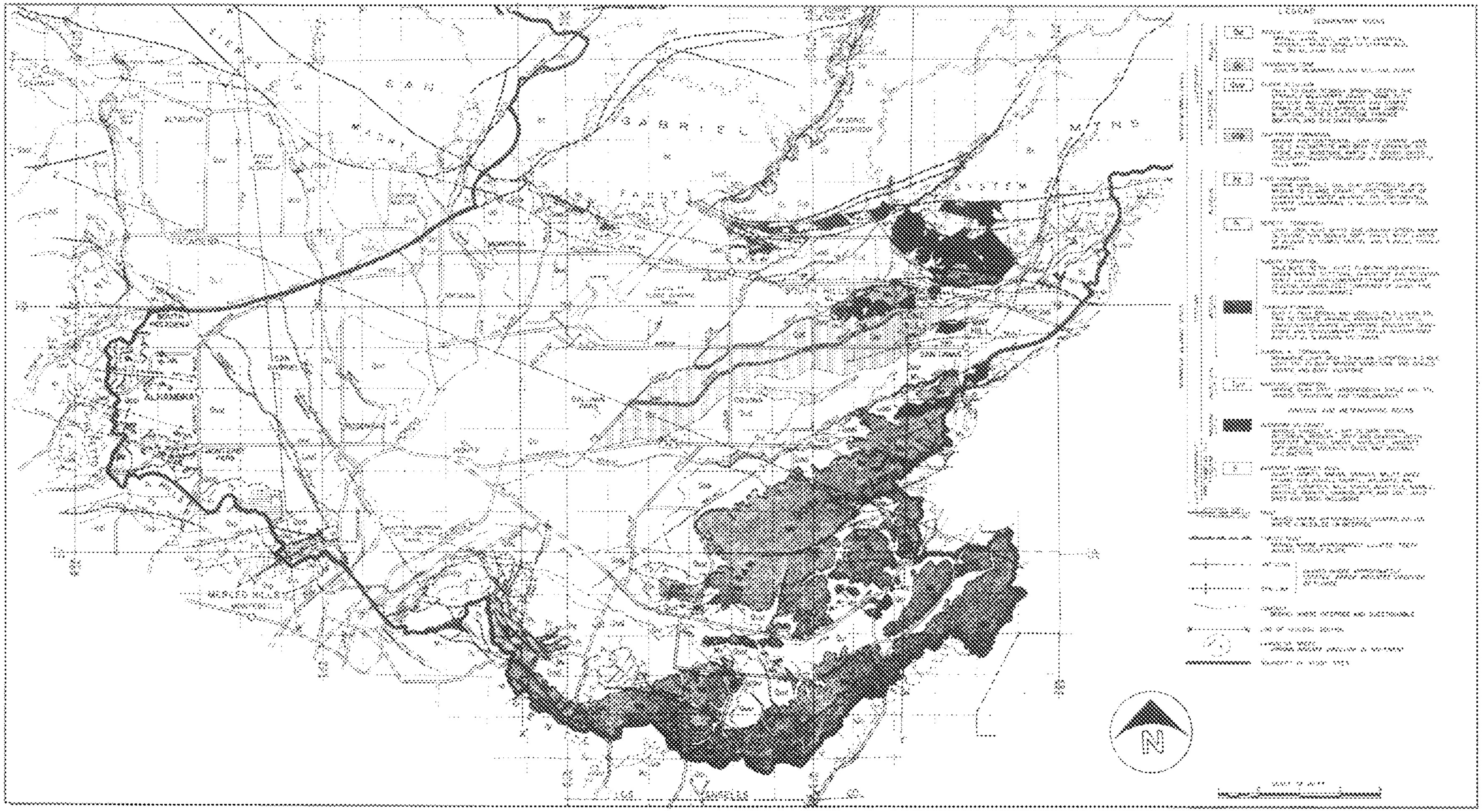
A.2.3 GEOLOGY

The geology of the San Gabriel Basin has been studied extensively by the CDWR (1962 and 1966). The geology encompassing the basin is complex and much of the geologic history of the region continues to be unravelled through ongoing research. It is not the purpose of this study to review the literature regarding the geologic history or the processes which have lead to the formation of the basin and surrounding features. Instead, the purpose is to identify the major geologic features and conditions which affect the occurrence and movement of groundwater. For this reason, the geology as described by the CDWR (1966) is considered adequate even though significant advances have been made in unravelling the geologic history of the region.

The CDWR (1966) identified nonwater-bearing and water-bearing formations in the San Gabriel Basin. Nonwater-bearing formations are those which yield relatively limited quantities of water to wells (5 to 15 gallons per minute) compared to water-bearing formations which provide significantly higher yields to wells (100 to 4,600 gallons per minute).

Figure A-2 is the regional geologic map presented by the CDWR (1966). As shown on this map, the nonwater-bearing formations include: (1) the igneous and metamorphic rock complexes forming the San Gabriel Mountains and (2) the consolidated sedimentary rocks comprising the low lying hills along the periphery of the basin. Igneous and metamorphic rocks also occur to a limited extent in the San Jose, South, and Puente Hills. Detailed descriptions of these nonwater-bearing formations are given in CDWR (1962 and 1966).

The water-bearing formations are principally unconsolidated and partially consolidated nonmarine sediments of Recent and Pleistocene age. Marine sediments of probably Pleistocene age and marine sediments of late Pliocene age are included with the water-bearing formations. The CDWR (1966) present many cross-sections through the basin which generally indicate the occurrence of coarse sediments, coarse gravel and boulders, close to the mountain front. Finer grained sediments make up larger percentages of the sediments as the



SOURCE: CDWR, 1968

FIGURE A-2
REGIONAL GEOLOGY
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

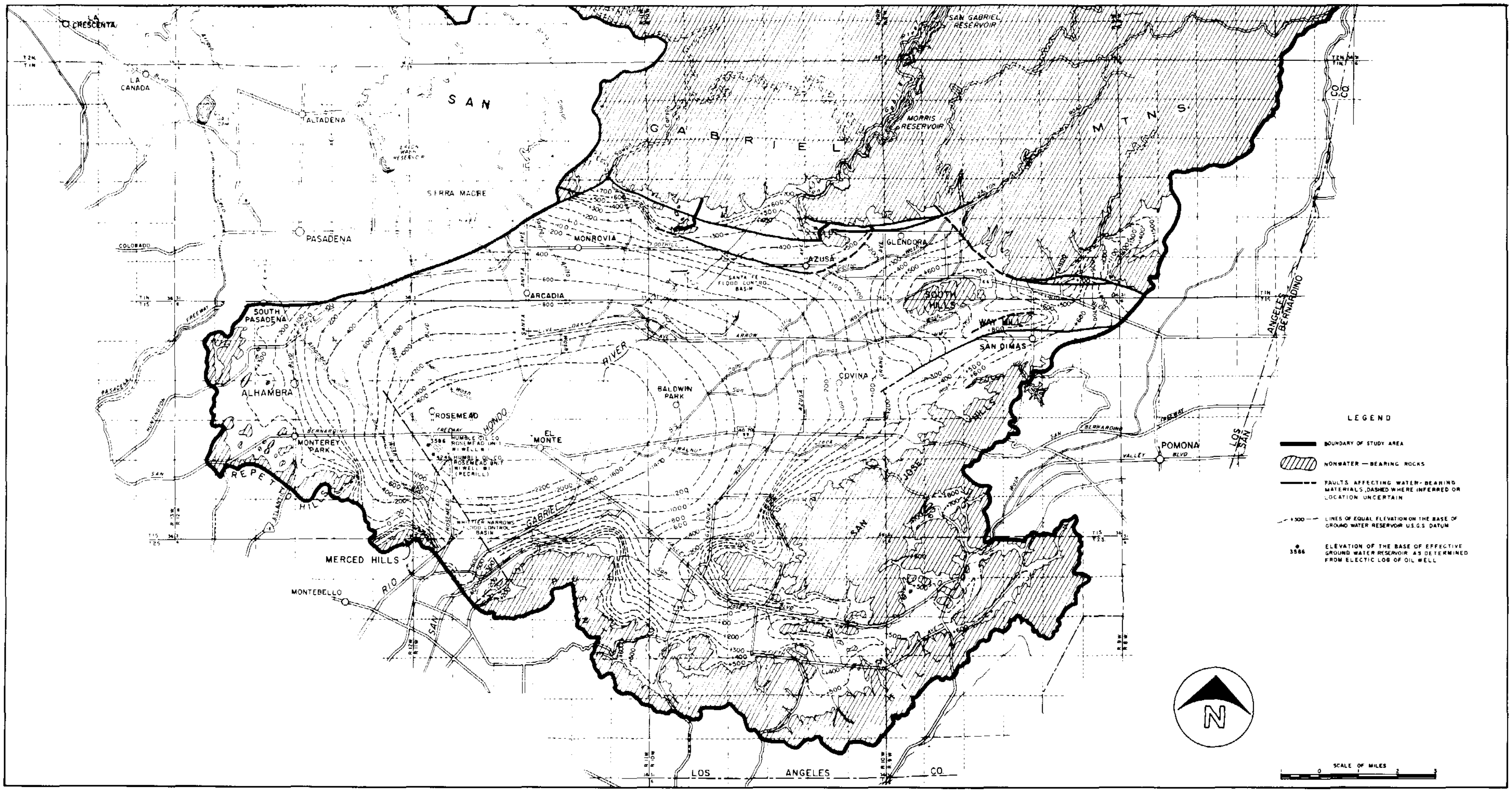
distance from the mountains increases. Although each formation making up the water-bearing series is described in some detail, the most important geologic condition of significance to the evaluation of their hydrogeologic properties is the trends in sediment size variations. Otherwise, the formations of the water-bearing series do not have individually distinctive hydrogeologic properties which require differentiation for hydrogeologic analyses.

The water-bearing series of formations ranges up to a maximum depth of over 4,000 feet. Figure A-3 is a map reproduced from the CDWR (1966) which shows the elevation of the effective base of the groundwater reservoir. As shown by this map, the alluvial basin is deepest in an area just southwest of the center of the basin, based on oil wells drilled in the area. This map also demonstrates the effect of major faults on the thickness of the alluvium.

The significant faults (Figure A-2) in the San Gabriel Basin affecting the water-bearing formations are as follows (CDWR, 1966):

- The Sierra Madre fault system which trends generally east to west at the base of the San Gabriel Mountains; in particular, the Duarte, Cucamonga and an unnamed fault. Groundwater occurring in the water-bearing series, north of these faults effectively "cascades" across the faults into the basin.

- The northwestern boundary of the basin is placed along the Raymond fault. Groundwater movement across this fault to the southeast is apparently impeded. The barrier effect is shown by marked differences in groundwater levels across the fault.



SOURCE: CDWR, 1966

FIGURE A-3
THE EFFECTIVE BASE OF
THE ALLUVIAL AQUIFER
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

- The Lone Hill-Way Hill faults displace the water-bearing formations but they have only a limited effect on groundwater movement.

- The Workman Hill fault extension occurs in the southwestern portion of the basin and crosses Whittier Narrows. The water-bearing formations are offset by this fault, but it does not appear to affect groundwater movement.

- The Walnut Creek fault trends northeast-southwest in the southeastern part of the basin. Although the water-bearing series is affected by this fault, it apparently has a very limited effect on groundwater levels.

A.2.4 OCCURRENCE AND MOVEMENT OF GROUNDWATER

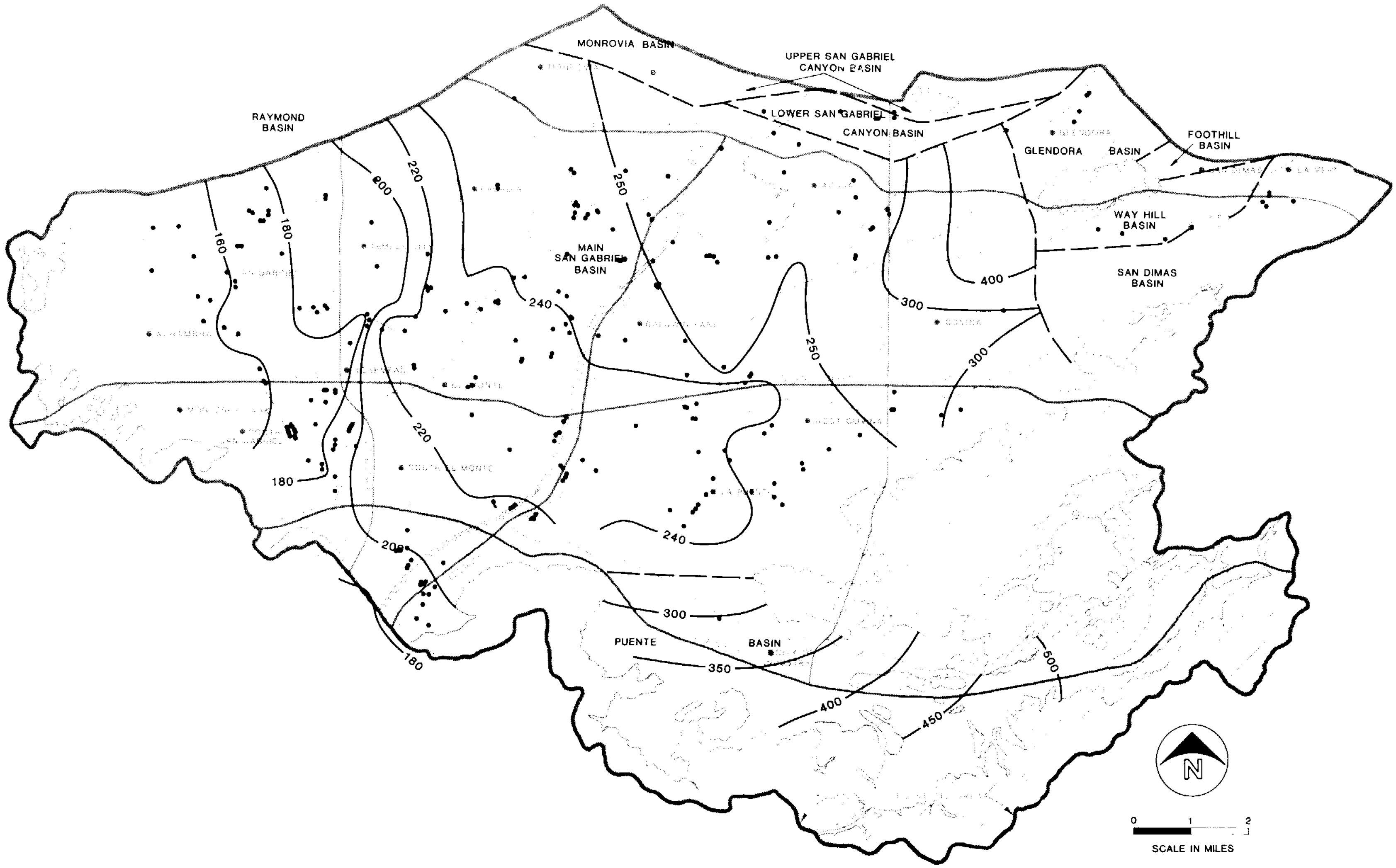
Groundwater occurs principally in the water-bearing formations described in Section A.2.3. Groundwater is stored and easily transmitted through the intergranular pore space of the unconsolidated and partially consolidated alluvial sediments. Groundwater also occurs in the nonwater-bearing formations. The permeability and storage characteristics of the nonwater-bearing formations, contrasted to the water-bearing formations, is expected to be such that the nonwater-bearing formations can be neglected in the analyses of groundwater movement in the alluvial basin. This assumption is evaluated further in Section A.5.

Groundwater movement in the San Gabriel Basin is generally from the perimeter of the basin toward Whittier Narrows, which is the only subsurface outflow (through alluvium) in the basin. On a local basis, groundwater moves from its source or recharge areas to discharge areas. Sources of groundwater include the following: deep percolation of precipitation; artificial recharge applied in spreading basins; streambed percolation, including water imported into the basin; and percolation of delivered water such as that water provided to a consumer for domestic, agricultural, commercial or industrial uses. Extractions of water include direct withdrawals by pumping, extractions by phreatophytes and groundwater discharge to the San Gabriel River and the Rio Hondo.

As illustrated in Section A.4, pumping is the major extraction of groundwater from the San Gabriel Basin. As a result, groundwater levels near major pumping centers are lower than surrounding levels. Figure A-4 shows groundwater level contours in the basin during Fall 1982. The location of wells pumping during the 1982-83 water year (October 1982 through September 1983), based on records maintained by the Main San Gabriel Basin Watermaster (1984) are also shown. The general movement of groundwater from the periphery of the basin toward Whittier Narrows is apparent from this map (water moves perpendicular to the water level contours). The effect of pumping is also seen by the depressions in the water level contours in the western and southeastern portions of the basin. A more detailed evaluation of groundwater flow rate and direction is developed in the remainder of this appendix.

A.3 HYDROGEOLOGIC PROPERTIES

The evaluation of the hydrogeology of the San Gabriel Basin requires the description of the water storage and transmitting properties of the water-bearing units. The hydrogeologic properties described in this section include aquifer thickness, hydraulic conductivity, specific yield, and effective porosity.



LEGEND

—160— WATER LEVELS, FALL 1982

• LOCATION OF PUMPING WELL

— — — BASIN BOUNDARY

NONWATER-BEARING ROCK

SOURCE: LACFCD, 1982

FIGURE A-4
GROUNDWATER BASINS IN THE
SAN GABRIEL VALLEY
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

A.3.1 AQUIFER THICKNESS

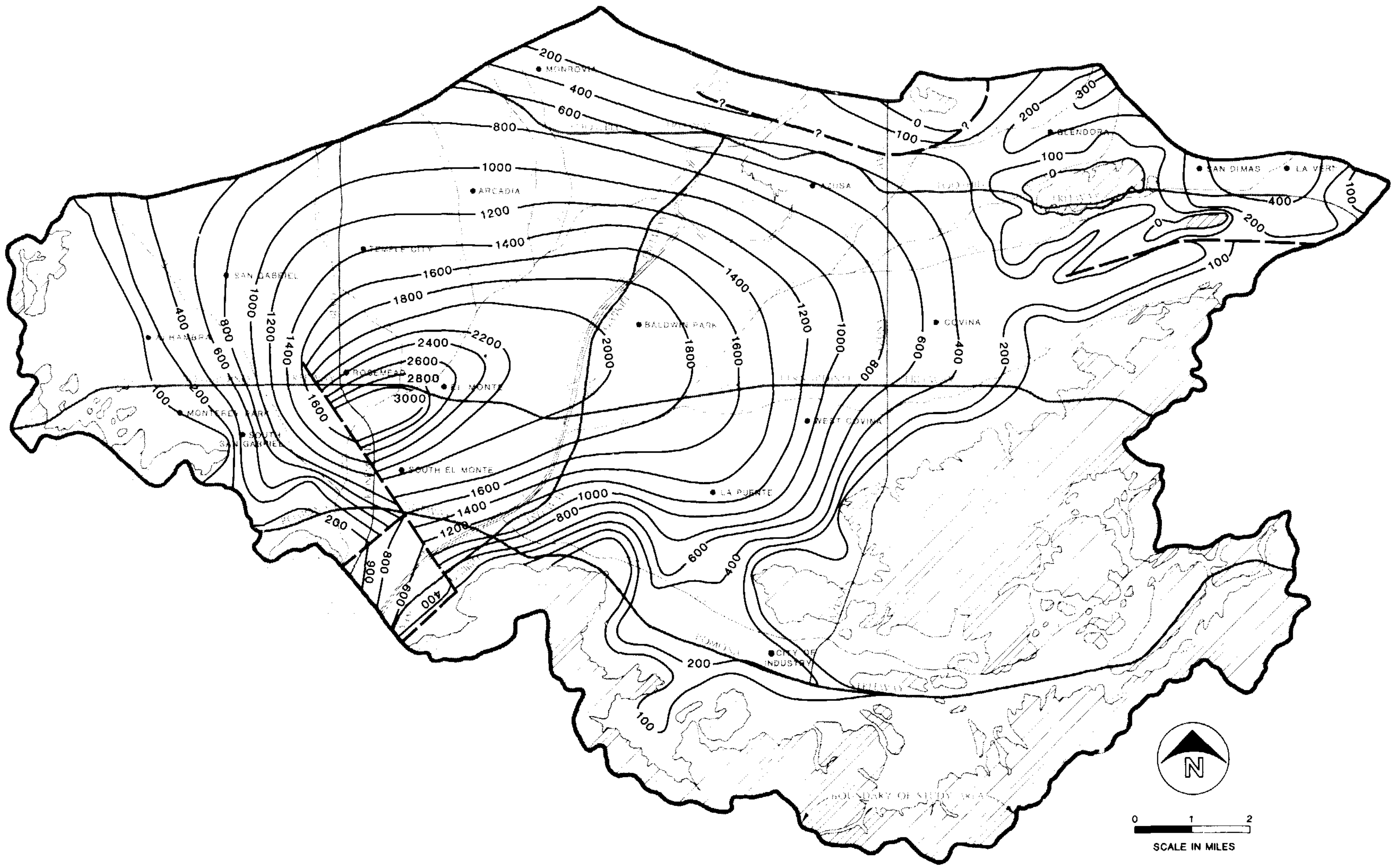
The data required to determine the saturated thickness of the water-bearing formations (herein referred to as the alluvial aquifer) in the San Gabriel Basin are:

- o the elevation of the base of the aquifer
- o the elevation of the water table

In some parts of the basin, the seasonal variation of the water table can exceed 100 feet (CDWR, 1966); therefore, the saturated thickness of the permeable alluvium will vary also. Figure A-5 shows the saturated thickness of the alluvial aquifer. This map is derived from the map of the effective base of the groundwater reservoir, Figure A-3, and the water table elevation in the Fall of 1944. The thickness of the saturated deposits averages about 900 to 1,000 feet over much of the basin, and about 800 feet in Whittier Narrows. At the east and west sides of the basin the saturated thickness averages about 400 feet. In the deepest portion of the basin, the saturated thickness of the alluvium may exceed 3,000 feet (CDWR, 1966).

A.3.2 HYDRAULIC CONDUCTIVITY

Hydraulic conductivity can be estimated from aquifer test results and from information on the lithology of the aquifer. Sixteen non-equilibrium drawdown and recovery aquifer test results were obtained from the CDWR (1966). In addition, the results of 67 specific capacity tests, reported on well logs obtained from the CDWR and the LACFCD were reviewed and analyzed. This information was augmented by lithologic descriptions provided on approximately 650 driller's well logs, also obtained from the CDWR and the LACFCD. Figure A-6 shows the locations of the wells used in the analysis of hydraulic conductivity and the results of

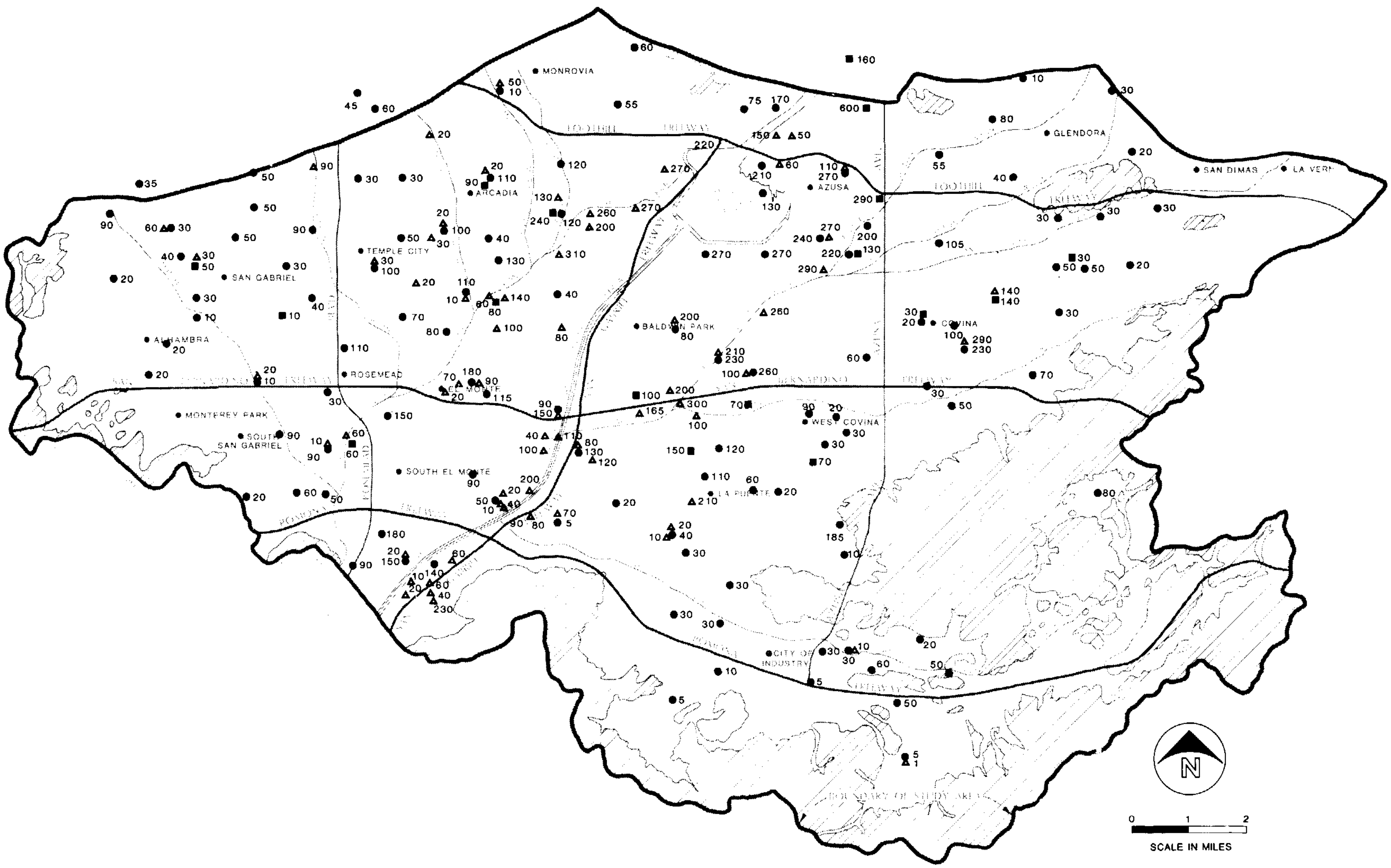


LEGEND

— 1800 — LINE OF CONSTANT SATURATED THICKNESS (FEET)

NONWATER-BEARING ROCK

FIGURE A-5
SATURATED THICKNESS OF THE ALLUVIAL AQUIFER
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



LEGEND

HYDRAULIC CONDUCTIVITY, FT/D

- ● BASED ON LITHOLOGY
- △ BASED ON SPECIFIC CAPACITY TEST
- ■ BASED ON AQUIFER TEST
- NONWATER-BEARING ROCK

FIGURE A-6
RESULTS OF ANALYSES
OF HYDRAULIC CONDUCTIVITY
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

the various analyses. The specific analyses performed in generating this map and further analysis of these data are described in the following subsections.

A.3.2.1 Aquifer Tests

The CDWR aquifer test analyses were conducted using the methods of Theis (1939) and Chow (1952). These tests involve fitting a curve or line to a plot of water level measurements versus time to obtain estimates of transmissivity. From the CDWR's transmissivity estimates, hydraulic conductivity was estimated by:

$$K = T/l \qquad \text{(A-1)}$$

where, K = Hydraulic conductivity
T = Transmissivity
l = length of well in saturated alluvium

The results of these aquifer tests and conductivity calculations are tabulated in Table A-1. This method of estimating hydraulic conductivity, and those described in Section A.3.2.2, involve a series of simplifying assumptions. For example, the aquifer test analyses assume that the well penetrates fully a homogeneous, isotropic, horizontal aquifer of infinite areal extent. Implicit in these test methods and Equation (A-1) is the assumption that the well is perforated (or screened) throughout the aquifer.

Information on the perforated intervals of the wells used in this and subsequent analyses is not always available. However, the large production wells analyzed are typically perforated over large intervals. Where this information was available, for ease of analysis, the value of l in Equation (A-1) has been taken to be the length of the well in the saturated alluvium from the uppermost perforations to the total depth of the well. In the absence of such information, l has been taken to be the total length of the well

Table A-1
RESULTS OF CDWR AQUIFER TESTS

CDWR Well Number	Type of Test	Transmissivity (ft^2/d)	Length of Well in Saturated Alluvium (ft)	Hydraulic Conductivity (ft/d)
IN/10W-22P1	Drawdown	17,000	100	170
1N/10W-27K1	Drawdown	80,000	125	600
1N/11W-34N3	Drawdown	50,000	540	90
1S/9W-8D1	Recovery	7,000	200	30
1S10W-3A1	Drawdown	117,000	500	230
1S/10W-10C1	Drawdown	35,000	275	130
1S/10W-12R1	Recovery	27,000	200	140
1S/10W-14B1	Recovery	6,000	200	30
1S/10W-28K3	Drawdown	11,000	160	70
1S/10W-30G1	Drawdown	75,000	500	150
1S/11W-2F1	Drawdown	100,000	425	240
1S/11W-10N6	Recovery	35,000	425	80
1S/11W-26K1	Drawdown	64,000	400	160
1S/11W-30B1	Recovery	15,000	250	60
1S/12W-11D1	Recovery	18,000	400	50
1S/12W-13B1	Drawdown	4,000	400	10

Source: CDWR, 1966.
Note: Values are rounded.

in the saturated alluvium. Therefore, estimates of hydraulic conductivity derived from Equation (A-1) may be underestimated when the well is only partially perforated. However, as discussed in Section A.3.2.4, this underestimation is likely to be at least partially offset by the effects of partial penetration. This phase of the investigation, therefore, uses some simplifying assumptions which may introduce error or uncertainty to the estimates of hydraulic conductivity, but still lead to reasonable order-of-magnitude estimates, which are considered sufficient for this phase of the investigation. Subsequent phases of the investigation may require a more detailed examination of hydraulic conductivity variations.

A.3.2.2 Specific Capacity Tests

Specific capacity testing consists of pumping a well at a constant rate until the water level in the well stabilizes. The pumping discharge and drawdown is recorded and the specific capacity is computed by dividing the discharge by the drawdown. Information on the pumping duration was included in 54 of the specific capacity tests. For these tests a non-equilibrium analyses of the data was used to estimate transmissivity. This method made use of the fact that for unconfined aquifers, where the drawdown is small relative to the initial saturated thickness, drawdown can be estimated by the Cooper-Jacob approximation (1946), where:

$$s(r,t) = \frac{Q}{4\pi T} \ln \frac{2.25tT}{r^2 S} \qquad \text{(A-2)}$$

and, $s(r,t)$ = drawdown at radial distance, r, from the well at time t

Q = pumping rate

T = transmissivity

S = storativity or specific yield

when $\frac{Sr^2}{4Tt} < 0.01$ (Bear, 1979).

If estimates of storativity or specific yield, time of pumping, radial distance, and pumping rate are available, the above equation can be solved iteratively for T. Specific yield, S, and the radial distrance, r, (in this case the effective well radius) must be estimated. However, because these parameters are related logarithmically to T, the calculated value of T is not greatly sensitive to errors in the estimates of these terms. This was verified by a sensitivity analysis of two wells. The results, illustrated in Figure A-7, indicate that over the possible range of the values of storativity in the basin (0.00001 to 0.3) calculated values of transmissivity are of the same order of magnitude. For the calculations of transmissivity of the other wells, a value of 0.001 was used. This value represents an average result from the aquifer tests described above, and it represents the midpoint of the most probable range of values. The effective radius was taken to be the actual radius of the well. The resulting estimate of transmissivity was used to calculate hydraulic conductivity using equation A-1. The results of the Cooper-Jacob non-equilibrium type analysis are presented in Table A-2.

For 13 of the wells with specific capacity type tests, the duration of pumping was not known. In order to analyze these tests, it was assumed that the water level in the pumping well had stabilized. Steady-state drawdown at a pumping well in a confined aquifer, or in an unconfined aquifer where drawdown is small compared to the total saturated thickness, can be expressed by the Thiem equation (Bear, 1979):

$$s_w = \frac{Q}{2\pi T} \ln(R/r_w) \qquad \text{(A-3)}$$

where,

s_w = drawdown at the well

Q = pumping rate

T = transmissivity

R = radius of influence, i.e., distance to the point of zero drawdown

r_w = effective radius of the well.

Given knowledge of the other parameters, transmissivity can be estimated from this equation. Because the terms R and r_w

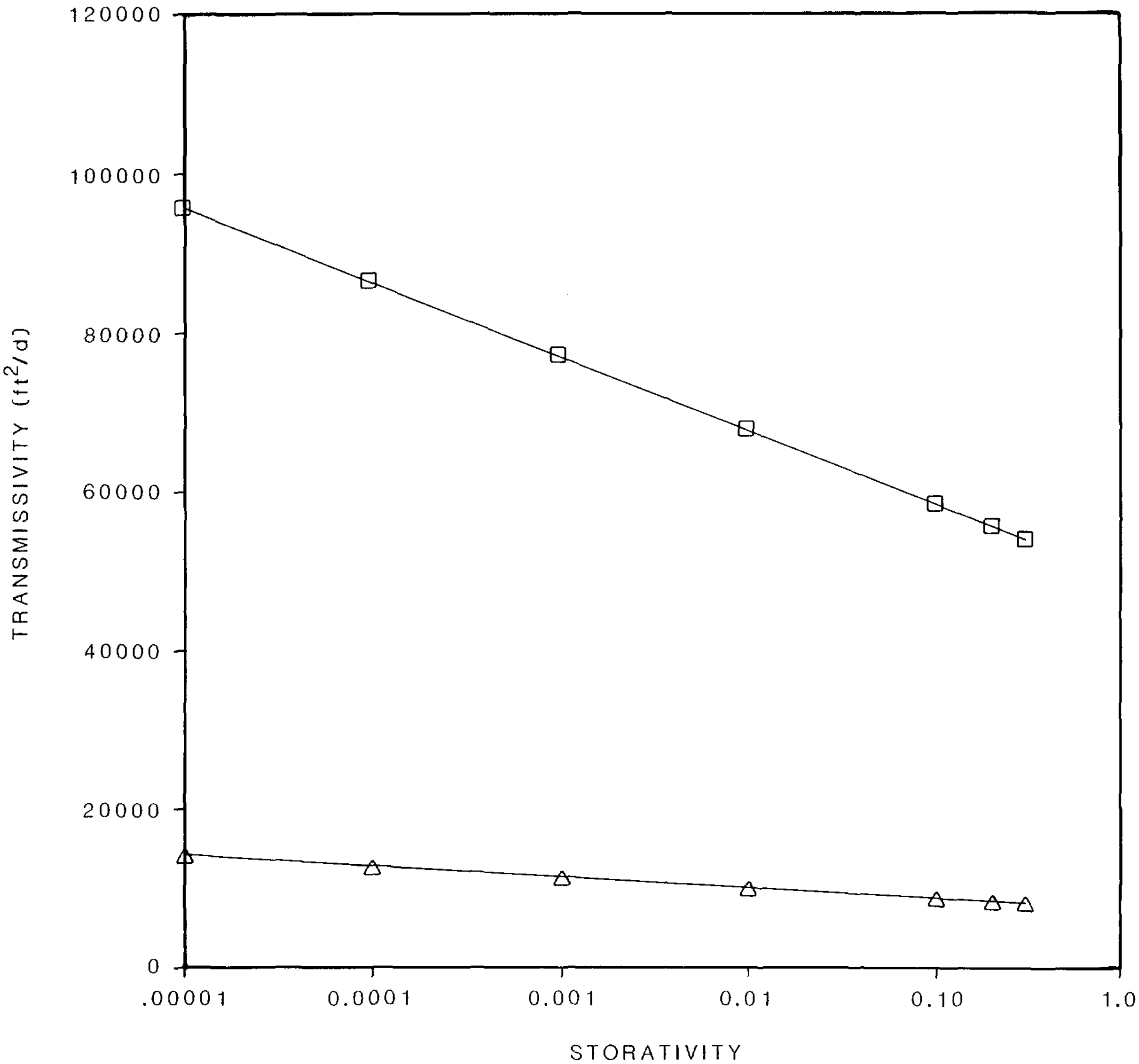


FIGURE A-7

SENSITIVITY OF TRANSMISSIVITY TO STORATIVITY IN NON-EQUILIBRIUM ANALYSIS OF SPECIFIC CAPACITY TESTS.

SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

Table A-2
RESULTS OF ANALYSIS OF SPECIFIC CAPACITY TESTS

CDWR Well Number	Type of Analysis	Transmissivity (ft^2/d)	Length of Well in Saturated Alluvium (ft)	Hydraulic Conductivity (ft)
1N/10W-31M1	Equilibrium	81,000	300	270
1N/10W-33C1	Non-Equilibrium	10,000	200	50
1N/10W-33D3	Non-Equilibrium	15,000	100	150
1N/10W-33D3	Equilibrium	18,000	100	180
1N/10W-33M2	Non-Equilibrium	30,000	500	60
1N/10W-34L1	Non-Equilibrium	38,000	350	110
1N/11W-27F1	Non-Equilibrium	22,000	450	50
1N/11W-31M1	Equilibrium	81,000	900	90
1N/11W-34N3	Equilibrium	9,000	400	20
1S/10W-4R2	Non-Equilibrium	95,000	350	270
1S/10W-9H1	Equilibrium	32,000	110	290
1S/10W-13L2	Non-Equilibrium	59,000	200	290
1S/10W-17A3	Non-Equilibrium	77,000	300	260
1S/10W-17N1	Non-Equilibrium	73,000	350	210
1S/10W-18F2	Non-Equilibrium	20,000	100	200
1S/10W-19F1	Non-Equilibrium	51,000	250	200
1S/10W-19L2	Non-Equilibrium	60,000	200	300
1S/10W-19Q6	Non-Equilibrium	19,000	200	100
1S/10W-20B14	Non-Equilibrium	30,000	300	100
1S/10W-31G9	Non-Equilibrium	150,000	700	210
1S/10W-31P5	Equilibrium	4,000	530	10
1S/10W-31P6	Non-Equilibrium	12,000	535	20
1S/11W-1G1	Non-Equilibrium	80,000	300	270
1S/11W-2C1	Non-Equilibrium	33,000	250	130
1S/11W-2H2	Non-Equilibrium	92,000	350	260
1S/11W-2J3	Non-Equilibrium	22,000	110	200
1S/11W-4L2	Non-Equilibrium	8,000	340	20
1S/11W-8E2	Non-Equilibrium	20,000	660	30
1S/11W-8J8	Non-Equilibrium	10,000	660	15
1S/11W-9Q4	Non-Equilibrium	10,000	710	15
1S/11W-10N7	Non-Equilibrium	22,000	400	50
1S/11W-10N9	Non-Equilibrium	22,000	450	50
1S/11W-10P1	Non-Equilibrium	7,000	50	140
1S/11W-11C4	Non-Equilibrium	108,000	350	310
1S/11W-14F5	Non-Equilibrium	24,000	300	80
1S/11W-15F4	Non-Equilibrium	15,000	150	100
1S/11W-21F2	Non-Equilibrium	37,000	500	70
1S/11W-21G3	Non-Equilibrium	8,000	350	20
1S/11W-21H1	Non-Equilibrium	43,000	465	90
1S/11W-23P2	Non-Equilibrium	53,000	350	150
1S/11W-24Q7	Non-Equilibrium	53,000	325	160
1S/11W-26C15	Non-Equilibrium	65,000	600	110
1S/11W-26D14	Non-Equilibrium	15,000	400	40
1S/11W-26E1	Non-Equilibrium	29,000	300	100
1S/11W-26G1	Non-Equilibrium	26,000	345	80
1S/11W-26J15	Non-Equilibrium	35,000	300	120
1S/11W-30B2	Equilibrium	17,000	300	60
1S/11W-30F1	Non-Equilibrium	6,000	1,000	10
1S/11W-30F1	Equilibrium	10,000	1,000	10
1S/11W-34A4	Equilibrium	20,000	100	200
1S/11W-34F1	Equilibrium	9,000	250	40
1S/11W-34F2	Equilibrium	7,000	200	40
1S/11W-34F3	Non-Equilibrium	5,000	250	20
1S/11W-34J1	Non-Equilibrium	8,000	100	80
1S/12W-3K1	Non-Equilibrium	23,000	380	60
1S/12W-11D1	Equilibrium	13,000	400	30
1S/12W-24D1	Non-Equilibrium	11,000	590	20
2S/10W-10P4	Non-Equilibrium	3,000	240	10
2S/11W-4G1	Non-Equilibrium	16,000	250	60
2S/11W-4M2	Non-Equilibrium	25,000	400	60
2S/11W-4N1	Equilibrium	20,000	200	100
2S/11W-4N1	Non-Equilibrium	9,000	200	40
2S/11W-4N8	Non-Equilibrium	18,000	500	40
2S/11W-4N9	Non-Equilibrium	40,000	175	230
2S/11W-5B12	Non-Equilibrium	7,000	450	20
2S/11W-5K1	Non-Equilibrium	3,500	425	10
2S/11W-5Q4	Non-Equilibrium	7,000	450	20

Note: Values are rounded.

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are logarithmically related to the transmissivity, even large errors in these parameters will not greatly effect estimates of transmissivity. The radius of influence, R, was estimated from (Bear, 1979):

$$R = 1.5\ (tT/S)^{\frac{1}{2}} \qquad \text{(A-4)}$$

where, t = time of pumping, say one day, but between 0.5 and 2 days

T = transmissivity, say 30,000 ft^2/d, but between 5,000 and 100,000 ft^2/d

S = storativity, say 0.001, but between 0.00001 and 0.3

These values of parameters (an average value and probable range) are based on the results and data of the non-equilibrium analyses. The average values yield a radius of influence of approximately 8,215 feet. But, if the probable range of values is considered, the radius of influence may lie between 140 and 213,000 feet. The effective well radius is about 0.8 feet, so $\ln(R/r_w)$ is about 9.24, but between 5.16 and 12.48. Therefore estimates using $\ln(R/r_w) = 9.24$ will be reliable to plus or minus about 40 percent. Hydraulic conductivity was calculated from this estimate of transmissivity using equation A-1. The results of these equilibrium calculations of hydraulic conductivity are tabulated in Table A-2.

A.3.2.3 Estimates from Lithologic Descriptions

Despite the numerous aquifer and specific capacity tests, some areas in the basin remained without estimates of hydraulic conductivity. Based on the review of some 650 well logs, representative well logs were selected to fill the gaps. Many of these corresponded with the logs utilized by the CDWR (1966, unpublished backup data) to estimate transmissivity. Using methods similar to the CDWR's, the average horizontal hydraulic conductivity at a well was calculated by:

$$K = \frac{\Sigma\, b_i\, K_i}{\Sigma\, b_i} \tag{A-5}$$

where, b_i = thickness of a layer with hydraulic conductivity K_i

The estimates of hydraulic conductivity of individual layers are based on the CDWR work, which correlated aquifer test results with lithologic descriptions. Table A-3 summarizes these conductivity estimates. The results of the calculations of average hydraulic conductivity from lithologic descriptions are presented in Table A-4.

Table A-3
HYDRAULIC CONDUCTIVITY VALUES
FOR DIFFERENT LITHOLOGIES

Lithology	(gpd/ft^2)	(ft/d)
gravel	2,000	270
sand and gravel	1,000	135
sandy clay	100	10
clay	0	0

This method of estimating hydraulic conductivity is clearly more approximate than the methods discussed previously. A principle limitation of the method is its reliance on the non-quantitative descriptions of aquifer materials as recorded in driller's logs. In order to obtain a measure of the accuracy of this method, the hydraulic conductivity estimates derived from lithologic descriptions of 19 wells were compared with the values of hydraulic conductivity derived from specific capacity tests at the same 19 wells.

Table A-4
RESULTS OF HYDRAULIC CONDUCTIVITY CALCULATIONS
BASED ON LITHOLGY

CDWR Well Number	Hydraulic Conductivity (ft/d)
1N/9W-29H1	30
1N/9W-30C1	10
1N/9W-31N1	40
1N/9W-33E1	20
1N/9W-35G2	30
1N/9W-36F1	140
1N/10W-25R1	75
1N/10W-28M1	170
1N/10W-29K1	75
1N/10W-31A1	220
1N/10W-32J2	210
1N/10W-34L1	270
1N/10W-35H2	55
1N/11W-24K3	60
1N/11W-25L1	55
1N/11W-27F1	10
1N/11W-29M1	60
1N/11W-30H1	45
1N/11W-31R1	30
1N/11W-32Q1	30
1N/11W-34N5	110
1N/11W-35L1	120
1N-12W-34N1	35
1N-12W-36M2	50
1S-9W-1F1	45
1S-9W-2H1	60
1S-9W-3H1	2
1S-9W-4G1	30
1S-9W-5G1	30
1S-9W-6H1	25
1S-9W-7H1	50
1S-9W-8F1	50
1S-9W-9E1	20
1S-9W-10A1	1
1S-9W-11B1	90
1S-9W-18A1	30
1S-9W-19C1	70
1S-9W-32C2	50

Table A-4
(Continued)

CDWR Well Number	Hydraulic Conductivity (ft/d)
1S-10W-2R1	105
1S-10W-3K2	200
1S-10W-4R2	240
1S-10W-7A1	270
1S-10W-8A1	270
1S-10W-10C2	220
1S-10W-12R1	135
1S-10W-13L2	230
1S-10W-13E1	100
1S-10W-14B1	20
1S-10W-15Q1	60
1S-10W-17N1	230
1S-10W-18F1	80
1S-10W-20B5	260
1S-10W-22N1	20
1S-10W-23G1	30
1S-10W-24M2	50
1S-10W-27C1	30
1S-10W-28H2	30
1S-10W-29E1	120
1S-10W-30R1	110
1S-10W-31P1	40
1S-10W-32B2	60
1S-10W-33D1	20
1S-10W-34L1	185
1S-11W-2F2	120
1S-11W-3N2	40
1S-11W-4L1	95
1S-11W-5Q1	50
1S-11W-6M1	90
1S-11W-7N1	40
1S-11W-8E2	100
1S-11W-9Q4	110
1S-11W-10F1	130
1S-11W-11P5	90
1S-11W-16F1	80
1S-11W-17B5	70
1S-11W-18K1	110
1S-11W-19F1	30
1S-11W-20P1	150
1S-11W-21H1	190
1S-11W-22E	115
1S-11W-23P2	90
1S-11W-25D1	40

Table A-4
(Continued)

CDWR Well Number	Hydraulic Conductivity (ft/d)
1S-11W-26G1	125
1S-11W-28R4	90
1S-11W-30F1	90
1S-11W-31C1	50
1S-11W-32P3	180
1S-11W-34F2	50
1S-11W-35L1	70
1S-11W-36F1	20
1S-12W-1E1	45
1S-12W-2Q1	50
1S-12W-3K1	30
1S-12W-4G1	90
1S-12W-9K1	20
1S-12W-10A1	40
1S-12W-11N1	30
1S-12W-12G1	30
1S-12W-14D1	10
1S-12W-15K1	20
1S-12W-22C1	20
1S-12W-24D1	10
1S-12W-25B7	85
1S-12W-35H1	20
1S-12W-36A5	60
2S-10W-3C1	10
2S-10W-5L2	30
2S-10W-6B5	30
2S-10W-7C1	30
2S-10W-8E1	30
2S-10W-9R1	30
2S-10W-10P4	30
2S-10W-11K1	20
2S-10W-13D4	50
2S-10W-14M1	50
2S-10W-15G1	60
2S-10W-16G1	5
2S-10W-17D1	10
2S-10W-18L1	5
2S-10W-23L1	5
2S-11W-4E1	140
2S-11W-5B12	145
2S-11W-6G1	90

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The results are displayed in Figure A-8. Although there is considerable scatter, for all of the wells both estimates of hydraulic conductivity agree to within about an order of magnitude. About 50 percent of the wells are within plus or minus about half an order of magnitude. However, in general, the conductivity estimated from lithology tends to be greater than that estimated from specific capacity tests.

A.3.2.4 Effects of Partial Penetration

The methods of Theis, Thiem, Cooper-Jacob, and Chow assume that a well is penetrating fully a homogeneous, isotropic horizontal aquifer of infinite areal extent. However, as described in Section A.3.1, the San Gabriel Basin alluvium is somewhat bowl shaped. The saturated alluvium is in some places over 3,000 feet thick. Clearly, these geologic conditions depart from the classical simplifying assumptions; many of the wells penetrate only a fraction of the aquifer. A brief analysis was made to preliminarily evaluate the effect of partially penetrating wells on aquifer test results. Drawdown associated with a partially penetrating well in an unconfined aquifer, where the drawdown is small compared to the saturated aquifer thickness, is given by Bouwer (1978):

$$s_w = \frac{Q}{4\pi T}\left(\ln \frac{2.25Tt}{r^2 S} + 2\ s_p\right) \qquad \text{(A-6)}$$

where,

s_w = drawdown at radial distance r from the well at time t

Q = pumping rate

T = transmissivity

S = storativity or specific yield

s_p = a term accounting for the effects of partial penetration

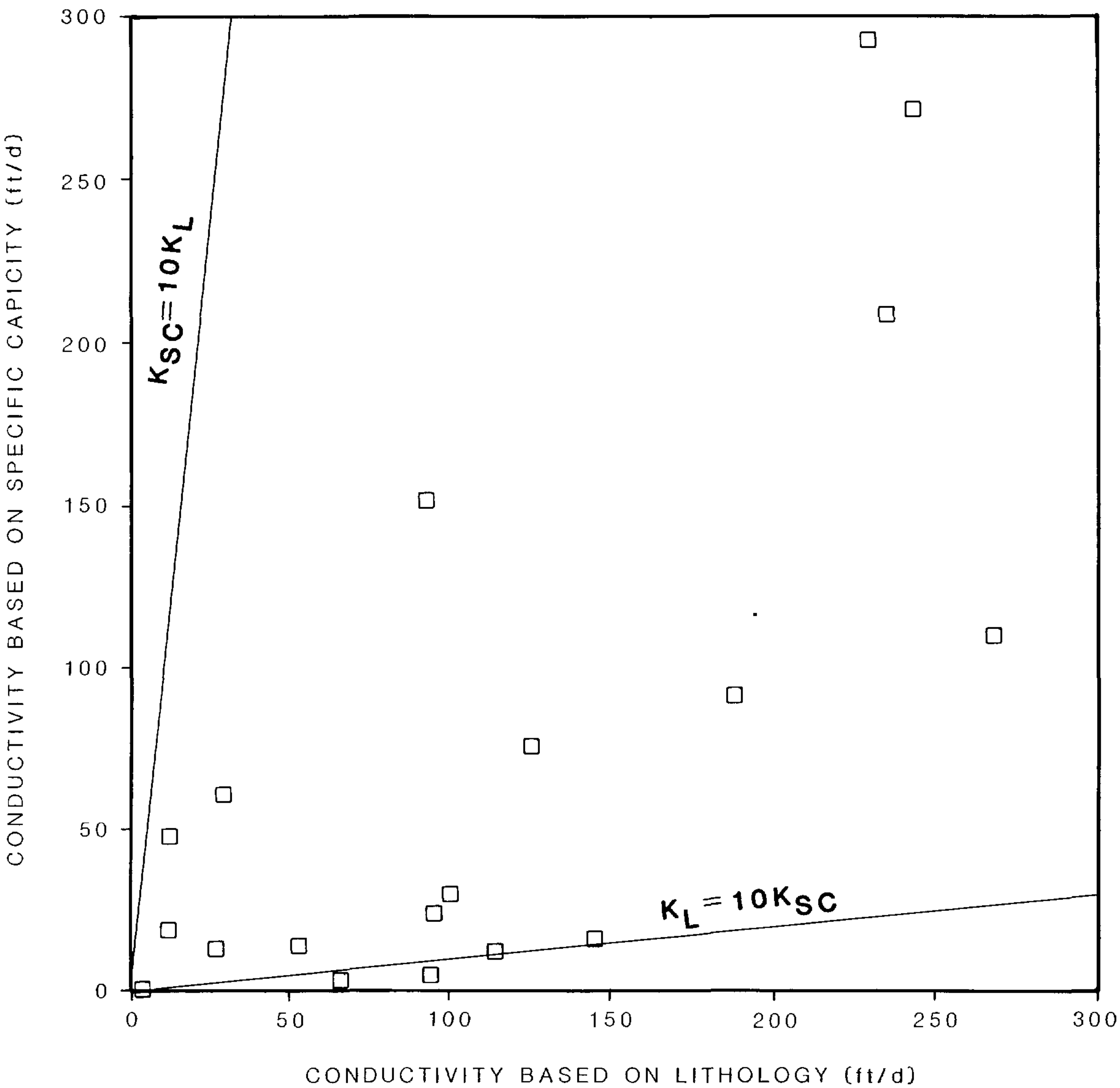

FIGURE A-8

COMPARISON OF ESTIMATES OF HYDRAULIC CONDUCTIVITY FROM SPECIFIC CAPACITY DATA (K_{SC}) AND FROM LITHOLOGY (K_L).

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The partial penetration factor, s_p, is a function of the geometry of the system as described by the well radius, r_w, the thickness of the saturated alluvium, D, and the length of the well penetrating the saturated alluvium, L_e. Based on the results of an analog model analysis, s_p has been determined as a set of type curves described as a function of the dimensionless parameters L_e/D (fractional penetration) and D/r_w (Bouwer, 1978). Based upon this method, under the geometric conditions encountered in the San Gabriel Basin, the value of the correction factor, s_p, would range from 0 (for a fully penetrating well) to approximately 40. The maximum value is based on a case of 10 percent penetration of 1,000 feet of saturated alluvium by a well with a radius of 0.8 feet. This scenario is somewhat extreme, but serves an an upper limit of the potential error. A more typical case in the basin might be the case of 60 percent penetration of 1,000 feet of saturated alluvium by a well of radius 0.8 feet. This would result in a value of approximately 3 for s_p.

In order to illustrate the effect of ignoring partial penetration in the interpretation of aquifer test results, consider as Case 1, Well 1N/10W-34L1. The transmissivity determined by iterative solution of the Cooper-Jacob equation as described above (see Table A-2), is 38,000 ft^2/d. As determined from the well log, the water table map and the map of the effective base of the groundwater reservoir, Figure A-3, 350 feet of the 400 feet of saturated alluvium are penetrated by the well with a radius of 0.8 feet. These factors lead to a s_p of approximately 1, which results in a transmissivity of approximately 41,000 ft^2/d, about 7 percent above that estimated by the Cooper-Jacob method. However, we are interested in using the results of the aquifer test to estimate hydraulic conductivity. Dividing the Cooper-Jacob estimate by the length of the well in the saturated alluvium gives a hydraulic conductivity value of approximately 110 ft/d. Dividing the transmissivity estimate which accounts for the effects of partial penetration by the saturated thickness of the aquifer gives a value of approximately 102 ft/d, about 7 percent lower than the Cooper-Jacob estimate.

Consider now Case 2. Assume the same specific capacity test results, but let $s_p = 10$, which would correspond to a scenario with similar well construction, but with 1,000 feet of saturated alluvium. We now have, accounting for partial penetration, a transmissivity of approximately 78,000 ft^2/d, about 105 percent greater than the Cooper-Jacob estimate. Dividing 78,000 ft^2/d by the saturated thickness, 1,000 feet, gives a hydraulic conductivity of 78 ft/d, now 28 percent lower than the Cooper-Jacob estimate. For the extreme case, Case 3, where $s_p = 40$, i.e., $L_e/D = 0.1$ (D = 3,500 feet), we have a transmissivity of approximately 200,000 ft^2/d, 426 percent higher than the Cooper-Jacob estimate. This yields, however, an estimated hydraulic conductivity of 57 ft/d, which is only 48 percent lower than the Cooper-Jacob estimate.

To summarize these results, not accounting for partial penetration may result in underestimating transmissivity by up to a factor of 5, but more likely by a factor of 1.2 to 2. Transmissivity is underestimated because the deeper, unpenetrated portion of the aquifer is not accounted for. At the same time, hydraulic conductivity may be overestimated by not accounting for the effects of partial penetration, but the error will be less severe. Hydraulic conductivity is over estimated by the Cooper-Jacob method because it does not account for the vertical flow components that are induced by the partial penetration. The overestimation caused by ignoring the effects of partial penetration may be by as much as a factor of 2, but is more likely to be by a factor of from 1.07 to 1.5. Moreover, this overestimation of hydraulic conductivity is likely to be offset somewhat when the well is not fully perforated and by neglecting the head loss resulting from the turbulent flow of water as it enters the well screen. This head loss, called well losses, was neglected in the analysis of the specific capacity tests, because of a lack of data with which to estimate the well losses. Step-drawdown tests, which are necessary to accurately estimate well losses were available only for a few wells. The well loss coefficients derived from these tests are unique to the well's condition at the time of the test. These coefficients are specific to a well and cannot be transferred to other wells in the basin with any degree of accuracy.

The scope of this stage of the investigation precludes an extensive and detailed re-evaluation of all of the aquifer tests to account for other departures from the idealized aquifer which includes the assumptions of homogeneous and isotropic hydraulic properties, constant thickness, horizontal structure, infinite areal extent, and a fully penetrating well. It is appropriate, however, to recognize that departures from the idealized aquifer model introduce error and uncertainty to the estimates of hydraulic conductivity.

Based upon the analyses described above, the estimates of hydraulic conductivity derived from available aquifer tests are judged to be accurate within an order of magnitude. That is, an estimate of 100 ft/d means that the average hydraulic conductivity is probably between 10 and 1,000 ft/d. The uncertainty in the hydraulic conductivity estimates are evaluated further in the section on numerical model analysis. It is important to note, however, that the values of hydraulic conductivity presented in the previous sections represent values that are effectively averaged over a finite volume of aquifer material. The hydraulic conductivities of the individual units of differing lithology which make up the volume of aquifer may in fact differ by much more than an order of magnitude, as suggested by Table A-3.

A.3.2.5 Results of Analysis

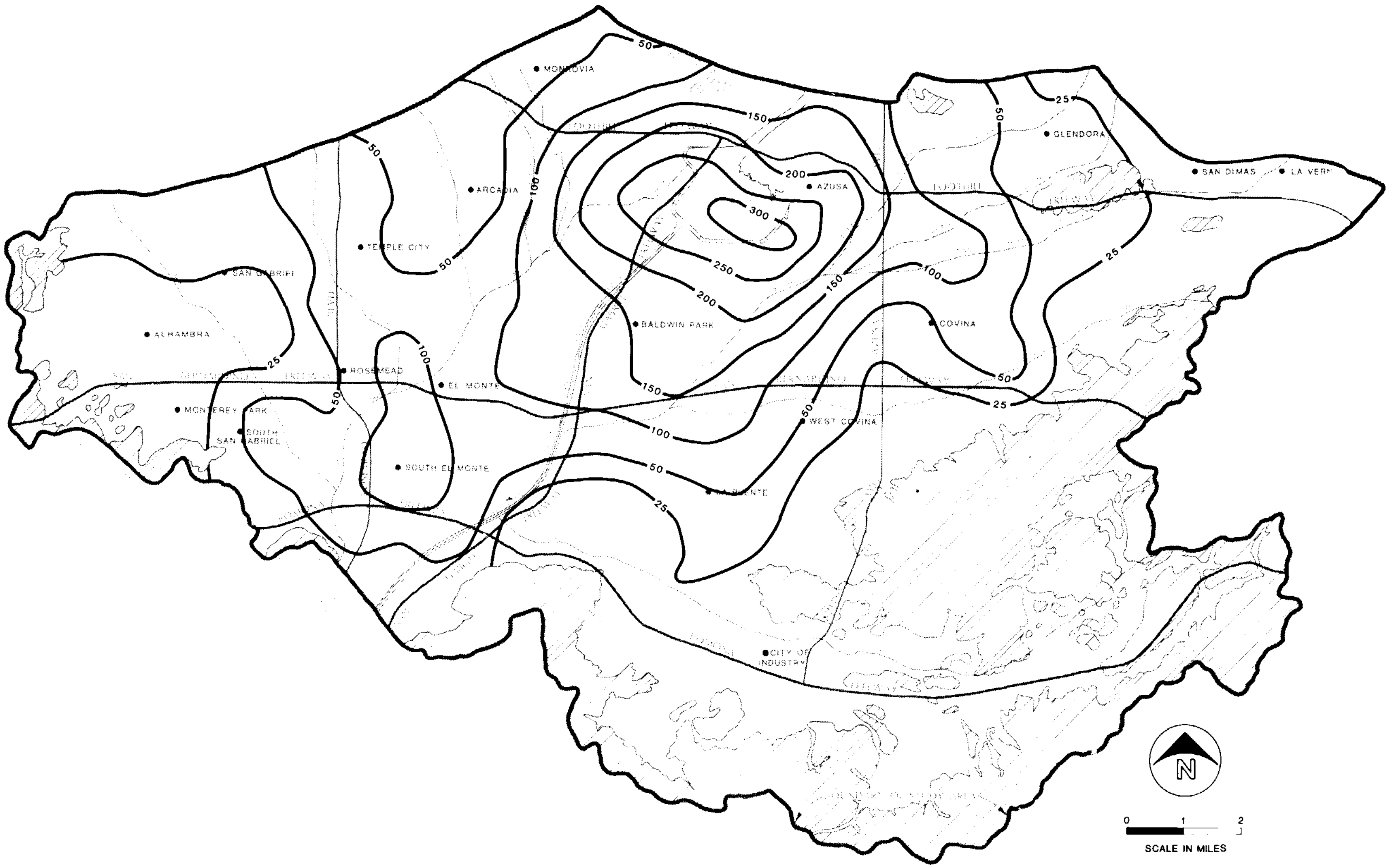
Values of hydraulic conductivity, determined from the analysis of CDWR aquifer tests, specific capacity tests, and well logs are shown in Figure A-6. The values range from about one to 600 ft/d. As might be expected, hydraulic conductivity values tend to be higher near the San Gabriel Mountains in the northern portion of the basin and along the San Gabriel River and the Rio Hondo. Hydraulic conductivity values decrease away from these features. This represents general agreement with the observations of the CDWR (1966). Despite the appearance of these general trends, there is a large amount of variability, even over small distances. These highly varying point estimates of hydraulic conductivity need to be reduced to some effective average over larger areas, using some averaging technique. Bouwer (1978) suggested that for cases of a heterogeneous material with a random conductivity distribution, the average hydraulic conductivity can be expected to be somewhere between the arithmetic and harmonic means, such as the geometric mean. This is because the average conductivity along a streamline will equal the harmonic mean of conductivity along that streamline, but the average conductivity normal to the streamline will be closer to the arithmetic mean, such as the geometric mean. Neuman (1980) concluded that within subregions where the mean hydraulic gradient is constant, an appropriate mean is the geometric mean, K_g, calculated as:

$$K_g = (K_1 \; K_2 \; K_3 \ldots K_n)^{1/n} \qquad \text{(A-7)}$$

It was assumed that the values of conductivity determined in each one square-mile section were either randomly distributed, or the mean hydraulic gradient was constant within each section. Accordingly, for each section for which data were available, the data were averaged using equation (A-7). These sectionally averaged values were then used as input to an interpolation routine based on the regional variable theory called kriging (Golden Software, 1985). The resulting values of conductivity were contoured and are presented in Figure A-9. This map shows that hydraulic conductivity tends to be highest in the center of the basin and near the mountain front. These are the areas of present and historic stream channels where probably more coarse-grained sediments have been deposited, owing to the higher velocities of the stream water. Moving away from these areas, the sediments are more fine-grained, probably having been deposited by waters with less energy, and, as a result, hydraulic conductivity values are lower. Again, it is important to note that these hydraulic conductivity values represent averages over a sizeable volume of alluvium, and small scale variations from these averages may be significant.

A.3.3 SPECIFIC YIELD

In unconfined aquifers, specific yield represents the amount of water released from storage by a unit decline in the water table per unit (horizontal) area. The amount of water retained in an aquifer per unit area and unit drop of the water table is called specific retention. The sum of specific yield and specific retention is the porosity of the aquifer. Specific yield is sometimes called effective porosity, representing that portion of the aquifer through which flow occurs (Bear, 1979). This parameter is important



LEGEND

—100— LINE OF EQUAL AVERAGE HYDRAULIC CONDUCTIVITY, FT/D (VARIABLE CONTOUR INTERVAL)

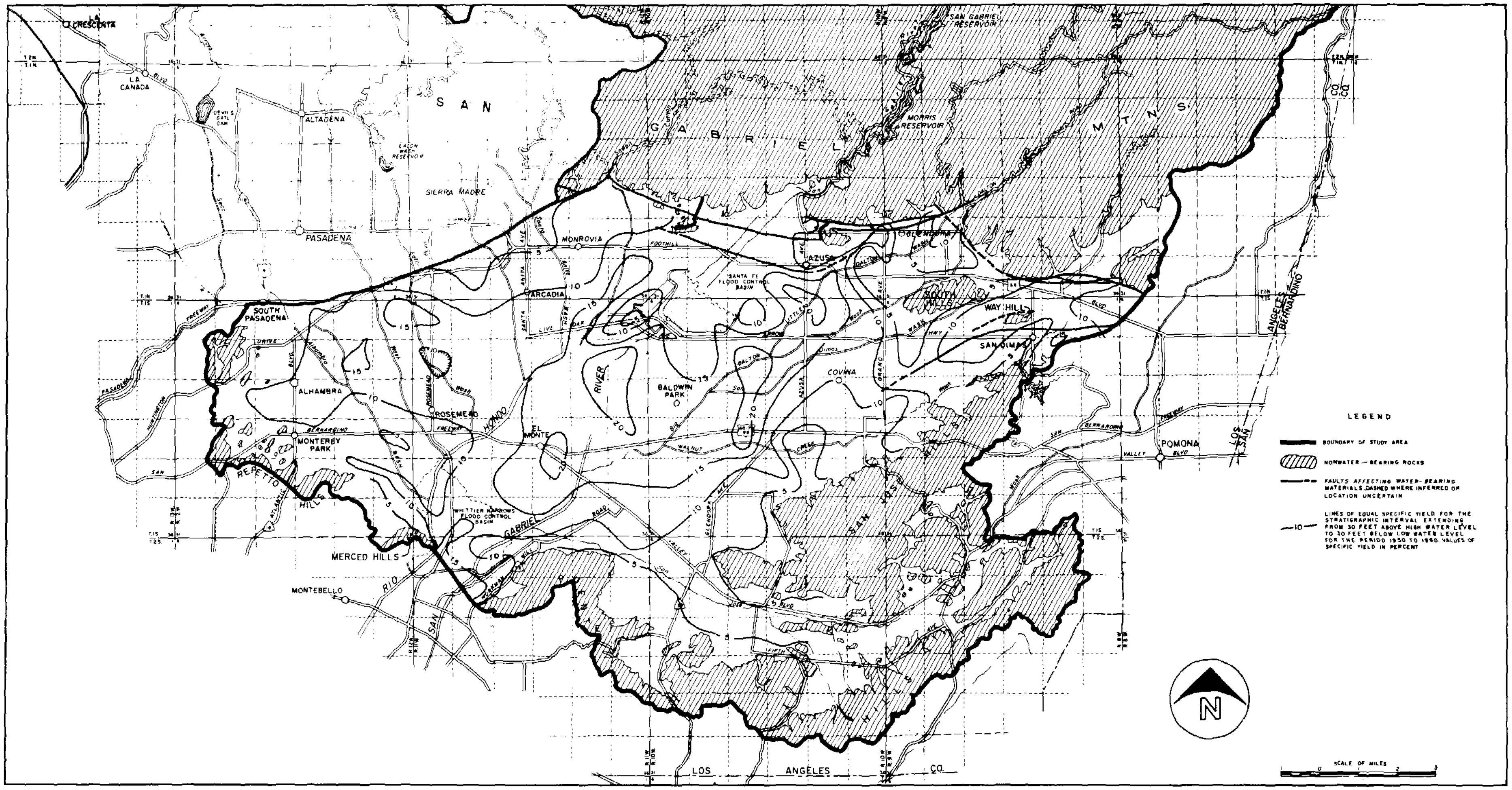
NONWATER-BEARING ROCK

FIGURE A-9
HYDRAULIC CONDUCTIVITY OF THE ALLUVIAL AQUIFER
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

in estimating groundwater velocities. This study uses the term specific yield of the unconfined alluvial aquifer as being equivalent to the effective porosity.

Figure A-10 shows contours of average specific yield of the alluvium in the San Gabriel Basin. This map was developed by the CDWR (1966) from a detailed analysis of over 600 well logs in the basin. Based on the lithologic descriptions, average values of specific yield were assigned to 20-foot vertical increments for each well log. Average values were obtained for each increment in each section and an average value for each section was obtained by averaging vertically. The trend of these results shows general correlation with the results of the analysis of hydraulic conductivity. Values are greater near the mountains and in the center of the basin where the fine-grained clay content of the alluvium is small. Moving away from these features the clay content increases and specific yield decreases.

In addition to these lithologically based estimates of specific yield, nine estimates were obtained from CDWR aquifer test results. These values, shown in Table A-5, range from about 0.00006 to 0.01 and are up to several orders of magnitude smaller than the estimates based on lithology. In addition, they are generally lower than the range of values typically associated with unconfined aquifers: 0.01 to 0.30 (Freeze and Cherry, 1979). The San Gabriel alluvium is generally considered to be unconfined throughout the basin (CDWR, 1966). The reason for this discrepancy may lie in the fact that specific yield may appear to be a time dependent parameter that approaches asymptotically an absolute value. The CDWR tests may not have been long enough in duration to yield this asymptotic value. Their calculated specific yield may in fact be what Neuman (1975) called the early time response or elastic response, which is



SOURCE: CDWR, 1966

FIGURE A-10
AVERAGE SPECIFIC YIELD
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

indicative of the amount of water being released from storage as a result of the elastic compressibility of the aquifer material. The actual specific yield comes from the delayed response of water draining from the pores of the aquifer. In addition, the wells tested are typically large production wells screened over a large interval of the aquifer. The deeper portions of the screened intervals may in fact be confined. Therefore, the values calculated from the aquifer tests may represent some average of the storativity in different parts of the aquifer.

Table A-5
STORATIVITY VALUES
FROM CDWR AQUIFER TESTS

CDWR Well Number	Storativity
1N/10W-22P1	0.00006
1N/10W-27K2	0.018
1N/11W-34N3	0.0036
1S/10W-3A1	0.00028
1S/10W-10C1	0.011
1S/10W-28K3	0.00022
1S/10W-30G1	0.0025
1S/11W-2F1	0.00029
1S/11W-26K1	0.0006

Source: CDWR, 1966.

A.4 GROUNDWATER BUDGET

In order to limit the scope of the investigation, the water budget analysis was limited to a groundwater budget analysis. This analysis considered the saturated zone of the alluvial basin, excluding the much less permeable bedrock, and the unsaturated alluvium, and considered only the net effects of surface water-groundwater interaction. In this conceptual model, groundwater in the basin comes from:

- recharge from precipitation
- recharge from applied water
- percolation of surface water through streambeds
- artificial recharge at spreading basins
- subsurface inflow

Groundwater leaves the basin by:

- subsurface outflow
- groundwater pumping
- groundwater discharge to rivers

The groundwater budget analysis was made for the period including water years 1977-78 (beginning October 1, 1977) through 1982-83 and the period of October 1983 through June 1984. This 6.75-year period was selected to include a reasonable range of the hydrologic conditions encountered over the longer period of record. But it is limited by the lack of sufficient data more recent than June 1984. The period coincides with the period selected for model calibration and verification. The area of interest also coincides with the area selected for discretization into the three-dimensional flow model. This area, shown in A-4, comprises the Main San Gabriel Basin as defined by the LACFCD (1982). It is bounded by the Raymond Fault (Raymond Basin) on the northwest, by the Duarte fault system on the north, by the Glendora, Way Hill and San Dimas Basins to the northeast, the San Jose Hills to the southeast, the Puente Basin and Whittier Narrows to the south, and the Repetto and Merced Hills to the southwest. This is an area of approximately 112 square miles or 71,680 acres.

A.4.1 RECHARGE FROM PRECIPITATION

For this analysis, recharge from precipitation is defined to be that component of precipitation that infiltrates to the groundwater table. That is, the precipitation, less surface runoff, less evapotranspiration losses. Based on a relation for recharge in the basin derived by the CDWR (1966), the average annual recharge rate in the basin is estimated by:

$$R_p = \begin{cases} 0, & P \leqq 7 \text{ in} \\ 0.4P - 0.3C, & 7 \text{ in.} < P \leqq 17 \text{ in} \\ 0.7P - 0.6C, & 17 \text{ in} < P \end{cases} \qquad \text{(A-8)}$$

where, R_p = average annual rate of recharge from precipitation

P = areally averaged annual precipitation
C = constant depending on the units

$C = 1.0$ if R_p and P are expressed in ft/yr

$C = 12.0$ if R_p and P are expressed in in/yr

The long term average precipitation in the basin varies from about 16 inches per year in the vicinity of Whittier Narrows to about 21 inches per year in Glendora (CDWR, 1966).

The areally averaged annual precipitation over the basin for each of the water years was estimated to be 85 percent of the precipitation recorded at the Glendora station. This estimate is based on an examination of the analyses of the CDWR (1966), which used the Thiessen Method to average rainfall at 44 rain gage stations over a 27-year period. Over this period, the average basin-wide precipitation was about 18 inches and the average precipitation at Glendora West station was about 21 inches.

The precipitation at the Glendora West station (NOAA, 1977-1982), the estimated basin-wide average precipitation, and the estimated recharge to the groundwater basin for the period of interest are summarized in Table A-6.

Table A-6
RECHARGE FROM PRECIPITATION

Water Year	Precipitation at Glendora in/yr	Basin-Wide Average in/yr	Recharge From Precipitation ac-ft/yr
1977-78	41.2	35.0	103,200
1978-79	29.4	25.0	60,900
1979-80	38.4	32.6	93,200
1980-81	11.0	9.4	700
1981-82	24.5	20.8	43,700
1982-83	44.7	38.0	115,900
Oct 83-June 84	16.2	13.8	4,200
Annual Average	29.8	25.4	62,300

A.4.2 RECHARGE FROM APPLIED WATER

Recharge resulting from the deep percolation of applied water was estimated by CDWR (1966). They estimated that percolation of delivered water comprised percolation of irrigation water and percolation of wastewater. However, during the base period of that study, there was extensive agricultural irrigation in the basin; this is no longer the case. In addition, the CDWR estimates included percolation of wastewater in channels that are now concrete-lined. Therefore, the estimates of CDWR are not readily applicable to this study.

The recharge from applied water under the current circumstances in the basin is assumed to be primarily from lawn watering in residential and recreational areas and from septic tanks, which are still used in the basin (Stetson Engineers, 1983).

A detailed analysis of the recharge resulting from the deep percolation of applied water is beyond the scope of the present study. In lieu of such a detailed analysis, deep percolation of applied water was estimated to be from 0 to 10 percent of the water supplied to consumers in the basin. This is based on estimates derived in the climatically and hydrogeolically similar San Fernando Valley (State Water Rights Board, Referee, 1962). Because over 90 percent of the water supply in the the basin is groundwater, deep percolation of applied water was taken to be 10 percent of the groundwater pumped. These estimates are tabulated in Table A-7.

Table A-7
RECHARGE FROM APPLIED WATER
(acre-feet per year)

Water Year	Estimated Recharge From Applied Water
1977-78	16,500
1978-79	17,700
1979-80	17,700
1980-81	19,200
1981-82	16,800
1982-83	16,300
Oct 83-June 84	17,300
Annual Average	17,400

A.4.3 PERCOLATION OF SURFACE WATER

Surface water reaches the groundwater table in the San Gabriel Basin by two pathways:

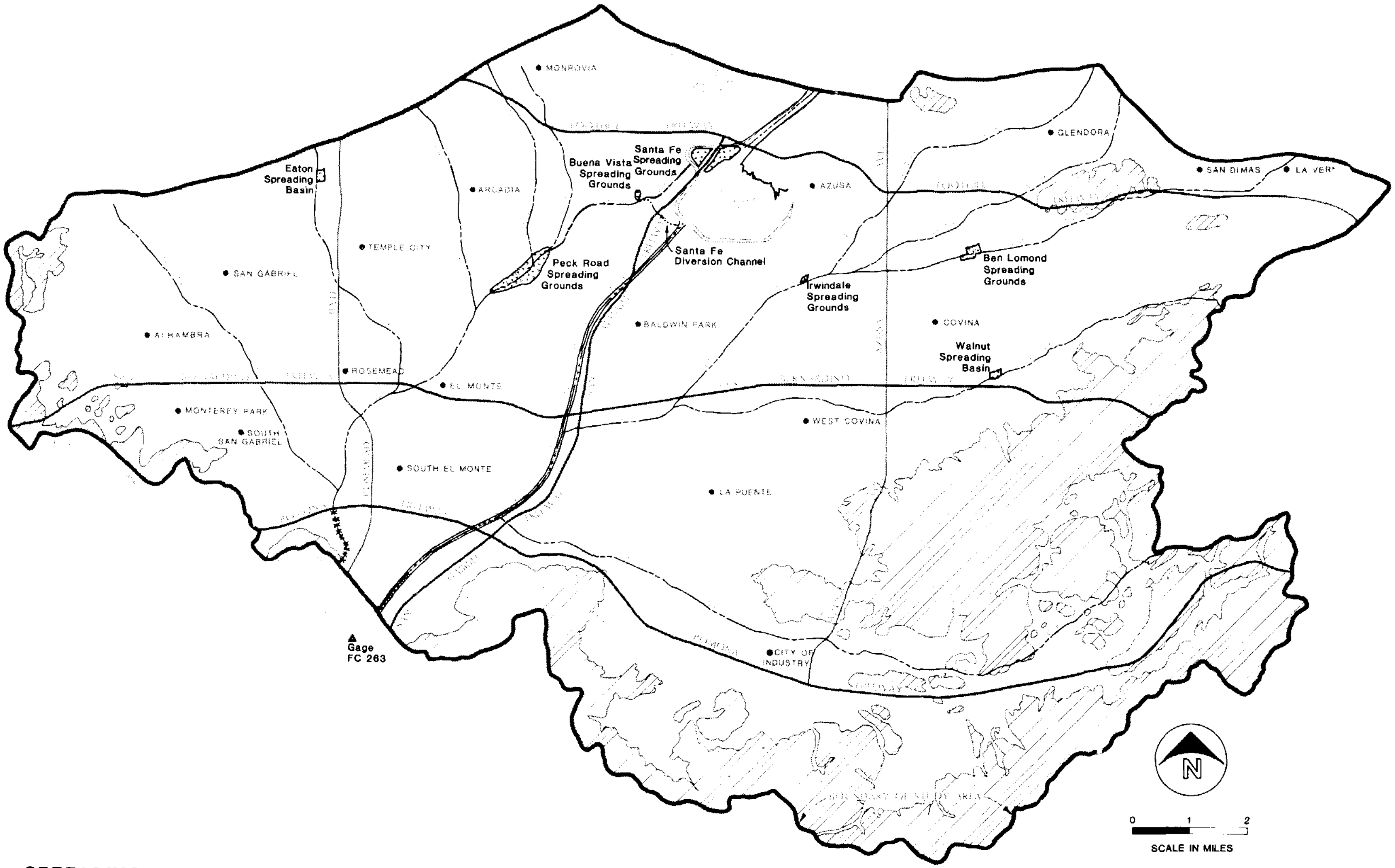
- natural percolation of streamflow through unlined pervious riverbeds
- artificial recharge at spreading basins

Figure A-11 shows the surface water features in the basin. Most of the stream channels in the valley have been lined with concrete, as part of flood control activities, and little or no percolation is believed to occur in these areas. However, the significant exceptions are the San Gabriel River throughout the study area, and the southern reach of the Rio Hondo. Estimates of the amount of water percolating through the riverbed in these reaches are made by the LACFCD, (unpublished data, 1977-1984) based on differences in stream flow at upstream and downstream gaging stations. These estimates are tabulated in Table A-8.

Table A-8
PERCOLATION THROUGH RIVERBEDS
(acre-feet per year)

	San Gabriel River			Rio Hondo	
Water Year	Santa Fe Reservoir	Santa Fe Division Canal	Santa Fe Reservoir to Gage F.C. 263	Peck Road to Whittier Narrows	Basin Total
1977-78	45,400	2,200	51,400	--	98,900
1978-79	19,700	--	30,600	--	50,300
1979-80	25,100	1,800	41,300	10,000	78,200
1980-81	3,500	--	3,800	3,100	10,500
1981-82	3,100	800	7,500	7,400	18,800
1982-83	20,300	1,100	27,800	4,300	49,900
Oct 83-June 84	13,500	700	18,400	2,800	35,400
Annual Average	19,300	1,000	26,900	4,100	51,300

Additional surface water is "conserved" in recharge or spreading basins from which the water percolates to the groundwater table. Monthly records of the amount "conserved" are maintained by the LACFCD (unpublished data, 1977-1984). The locations of these recharge basins are shown in Figure A-11. The estimates of the annual amounts of recharge from this source for water year 1977-1978 through June 1984 are tabulated in Table A-9.



LEGEND

SPREADING BASIN
UNLINED CHANNEL
REACH OF GROUNDWATER DISCHARGE TO RIVERS
LINED CHANNEL
NONWATER-BEARING ROCK

FIGURE A-11
SURFACE WATER FEATURES WITHIN THE MODEL AREA
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

Table A-9
ARTIFICIAL RECHARGE BY SPREADING BASIN
(acre-feet per year)

Water Year	Ben Lomond	Buena Vista	Eaton	Irwindale	Walnut	Peck Road	Santa Fe	Basin Total
1977-78	3,300	800	1,100	7,600	1,500	8,500	87,600	110,400
1978-79	6,200	500	500	2,200	1,800	9,200	55,800	76,300
1979-80	5,500	500	700	5,600	1,100	200	52,300	65,800
1980-81	4,600	200	700	600	1,300	5,600	300	13,300
1981-82	3,000	600	2,000	2,800	1,700	6,500	35,000	51,700
1982-83	4,600	1,400	3,500	2,800	2,700	26,800	124,700	166,500
Oct 83-June 84	3,900	1,200	1,800	2,100	2,500	7,200	22,800	41,500
Annual Average	4,500	700	1,500	3,400	1,800	9,200	55,200	76,300

A.4.4 SUBSURFACE FLOW

Groundwater flowing from adjacent basins enters the study area in the subsurface. This subsurface flow can be divided into four regions:

- From the Raymond Basin, across the Raymond Fault
- From the Monrovia, Upper and Lower San Gabriel Canyon Basins, across the Duarte Fault system
- From the Glendora, Way Hill, and San Dimas Basins
- From the Puente Basin

The amount of groundwater flowing across these boundaries was estimated for the water years 1977-78 through 1981-82 using a form of Darcy's Law:

$$Q = KAI \tag{A-9}$$

where Q is the flow rate, K is hydraulic conductivity, A is the cross-sectional area across which flow occurs, and I is the hydraulic gradient across the boundary. The gradient, I, was determined from maps of the Fall water table for each year (LACFCD, 1977-1982). The cross-sectional area was determined from the water table maps and a structural contour of the base of the groundwater reservoir (CDWR, 1966). Based on previous workers (CDWR, 1966) and simulation results (see Section A.5, Numerical Model Analysis) flow entering the basin from the nonwater-bearing formations was assumed to be negligible. In general, hydraulic conductivity values determined as described previously were used in the calculations. However, the Raymond and Duarte Fault systems constitute partial barriers to groundwater flow (CDWR, 1966) by the offset of less permeable bedrock and/or the creation of low permeability crush zones in the alluvium. Here the conductivity of the fault zone was estimated to be about an order of magnitude less than the adjacent alluvium. These estimates were then verified and adjusted by comparison with calculations of flow just upstream and downstream of the respective fault systems. No water table maps more recent than the Fall 1982 map were available. Subsurface flow rates for the water year 1982-83 and through June 1984 were assumed to be equal to the average values determined from the 5 years for which data were available.

Subsurface flow is known to leave the basin only at Whittier Narrows (CDWR, 1966). The amount of groundwater flowing through Whitter Narrows is calculated by the San Gabriel River Watermaster based on methods similar to those described above. The Stipulation for Judgment for the case of City of Long Beach, et al., Case No. 722647, defines the details of the calculation methodology. For the purposes of this study, the subsurface flow is taken to be the average of the fall and spring calculations for that water year. For example, for the water year 1980-81, the subsurface outflow is the average of the amounts reported for Fall 1980 and Spring 1981 (San Gabriel River Watermaster, 1976-1986). These calculated subsurface flow rates are summarized in Table A-10.

Table A-10
SUBSURFACE FLOW
(acre-feet per year)

Water Year	Raymond Fault	Duarte Fault System	Glendora-Way Hill-San Dimas Basins	Puente Basin	Total Inflow	Whittier Narrows-Outflow
1977-78	7,200	19,000	29,300	9,700	65,200	-27,100
1978-79	7,100	19,000	25,100	12,400	63,600	-23,900
1979-80	7,000	18,000	25,100	11,200	61,300	-23,800
1980-81	7,000	22,000	39,800	8,900	77,700	-32,000
1981-82	7,700	21,000	9,600	12,400	50,700	-28,900
1982-83	7,200	19,800	25,800	10,900	63,700	-29,300
Oct 83-June 84	7,200	19,800	25,800	10,900	63,700	-26,800
Annual Average	7,200	19,800	25,800	10,900	63,700	-27,400

A.4.5 GROUNDWATER PUMPING

Records of groundwater extraction from wells in the Main San Gabriel Basin are compiled and reported by the Main San Gabriel Basin Watermaster (MSGB Watermaster, 1977 through 1984). These records include extractions in Monrovia, Lower and Upper San Gabriel Canyon, Glendora, Way Hill, San Dimas, Live Oak, and Foothill Basins and portions of Puente Basin (as shown in Figure A-4 and as defined by LACFCD, 1982). From these records the amount of groundwater pumping in the Main San Gabriel Basin (as defined in this report and the LACFCD) was determined. These quantities are tabulated in Table A-11. Because this report excludes a portion of the basin, the total amount of pumped groundwater reported here is slightly less than the amount reported by the Main San Gabriel Basin Watermaster's Annual Reports (1973-1984).

Table A-11
GROUNDWATER PUMPING
(acre-feet per year)

Water Year	Groundwater Pumping
1977-78	165,100
1978-79	177,100
1979-80	176,700
1980-81	191,800
1981-82	167,800
1982-83	163,400
Oct 83-June 84	173,600
Annual Average	173,600

A.4.6 GROUNDWATER DISCHARGE TO RIVERS

As discussed earlier, most of the unlined riverbeds in the basin are areas of groundwater recharge. However, in the vicinity of Whittier Narrows, groundwater is known to discharge into the Rio Hondo and San Gabriel River (CDWR, 1966). The LACFCD (1985, unpublished data) estimated that the Rio Hondo gains from 3 to 6 cubic feet per second (cfs) during the dry summer months and from 5 to 10 cfs during the wetter winter months when groundwater levels are higher. The San Gabriel River is estimated to gain about 6 cfs during the dry season and about 10 to 15 cfs during the wet season. Based on these estimates, and the precipitation during the time period, the amounts of groundwater discharge to these rivers was estimated. These estimates are tabulated in Table A-12.

Table A-12
GROUNDWATER DISCHARGE TO RIVERS
(acre-feet per year)

Water Year	Groundwater Discharge
1977-78	20,000
1978-79	14,000
1979-80	19,000
1980-81	7,000
1981-82	12,000
1982-83	22,000
Oct 83-June 84	6,000
Annual Average	14,500

A.4.7 DISCUSSION

The net results of the analyses of the components of the groundwater budget are summarized in Table A-13 and Figure A-12. The relative importance of the annual averages of the components of the groundwater budget are displayed in Figure A-13. On the average, groundwater inflow to the basin is about evenly divided among riverbed leakage, recharge from precipitation, artificial recharge at spreading basins, and subsurface inflow; with lesser amounts coming from applied water. The withdrawal of groundwater by wells, on the other hand, accounts for over 80 percent of the groundwater outflow. The remainder of the outflow is about evenly divided between subsurface outflow and groundwater discharge to rivers.

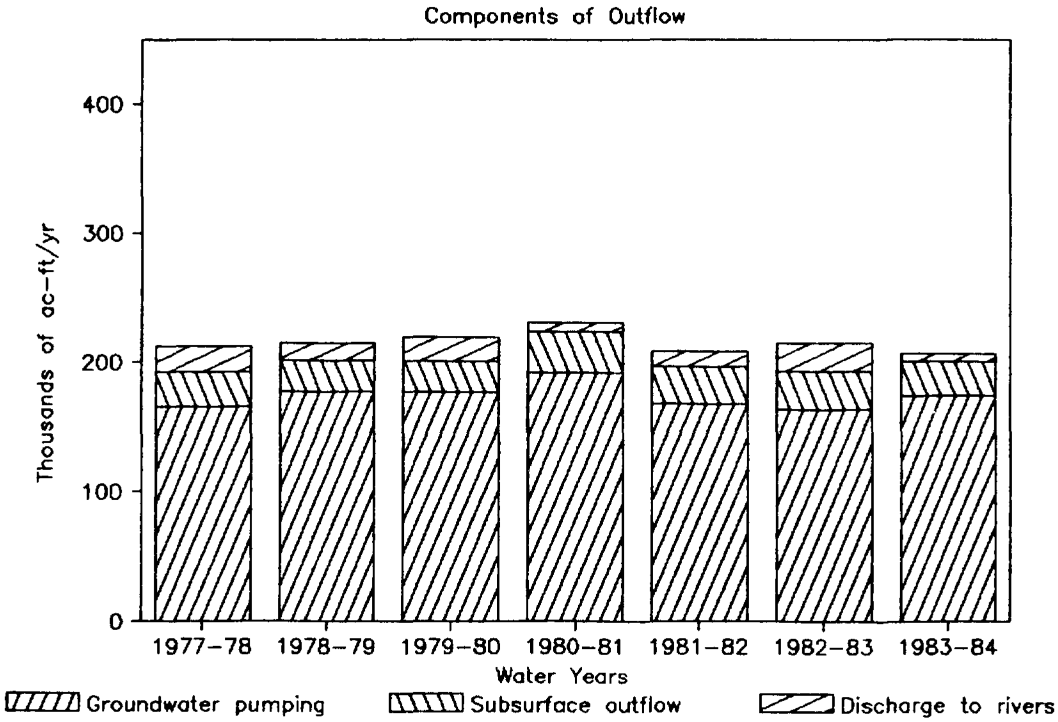
During the 6-3/4-year study period there was an increase in storage of about 353,000 acre-feet, an average annual increase of 54,000 ac-ft/yr. This increase in storage was due largely to the greater than normal recharge from precipitation during the first 3 years and the fifth year of the study period. In general, however, the basin seems to

Table A-13
COMPARISON OF CALCULATED GROUNDWATER BUDGET

	1977-78	1978-79	1979-80	1980-81	1981-82	1982-83	10/83-6/84	Annual Average
INFLOW								
Recharge	103,000	60,900	93,200	700	43,700	115,900	4,200	62,300
Applied Water	16,500	17,700	17,700	19,200	16,800	16,300	17,400	17,400
Riverbeds	98,900	50,300	78,200	10,500	18,800	53,500	35,400	49,900
Artificial	110,400	76,300	65,800	13,300	51,700	166,500	41,500	76,300
Total Recharge	328,800	205,200	254,900	43,700	131,000	352,200	98,500	205,900
Subsurface Inflow	65,200	63,600	61,300	77,700	50,700	63,700	63,700	63,700
Total Inflow	394,000	268,800	316,200	121,400	181,700	415,900	162,200	269,600
OUTFLOW								
Pumping	165,100	177,100	176,700	191,800	167,800	163,400	173,600	173,600
Subsurface Outflow	27,100	23,900	23,800	32,000	28,900	29,300	26,800	27,400
Discharge to Rivers	20,000	14,000	19,000	7,000	12,000	22,000	6,000	14,600
Total Outflow	212,200	215,000	219,500	230,800	208,700	214,700	206,400	215,600
Annual Change in Storage (ac-ft)	181,900	53,900	96,700	-109,400	-27,000	201,300	-44,200	54,000
Cumulative Net Change in Storage (ac-ft)	181,900	235,700	332,400	223,100	196,100	397,400	353,200	

Notes: Values in acre-feet/year unless noted otherwise
Values are rounded

LASG2/012



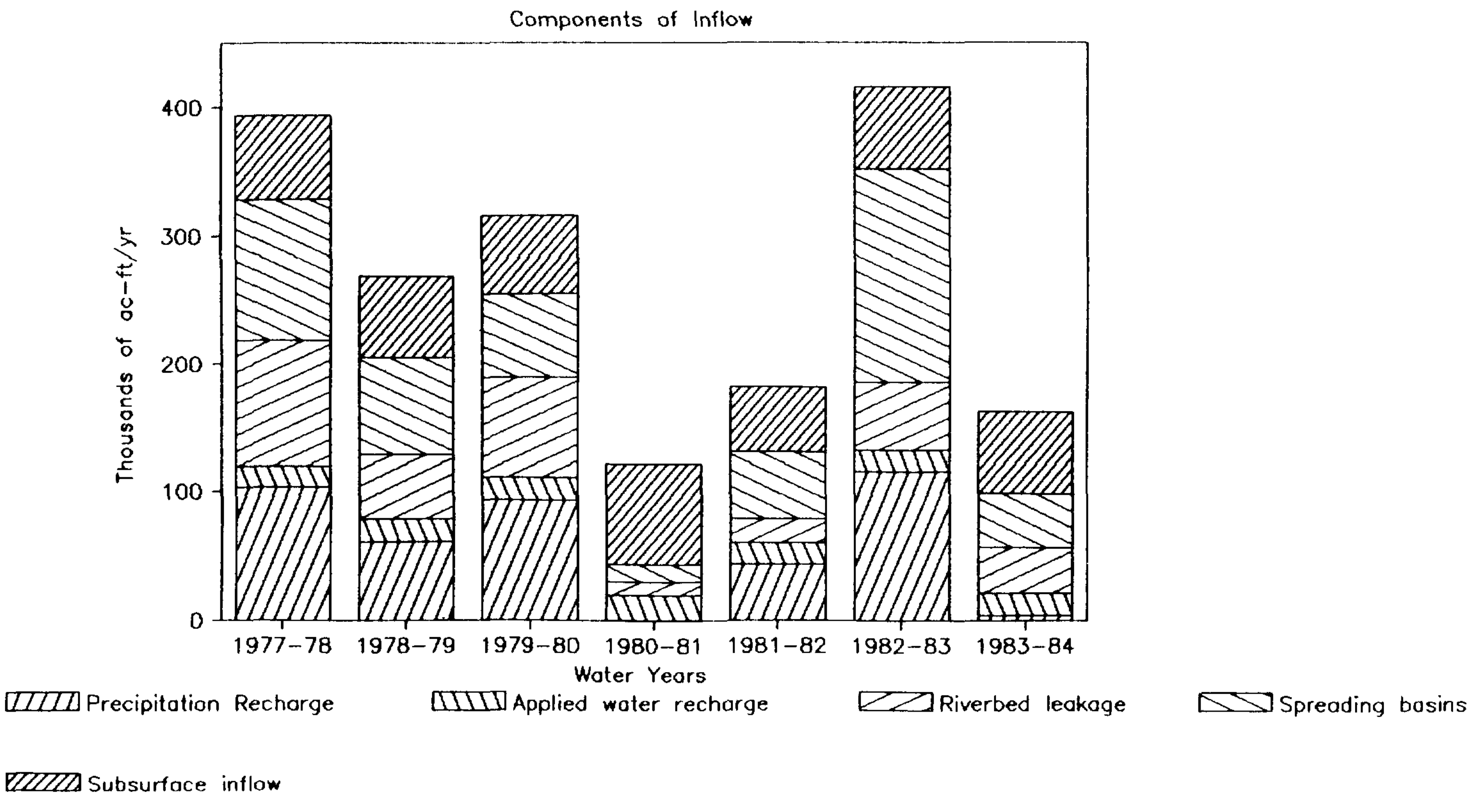
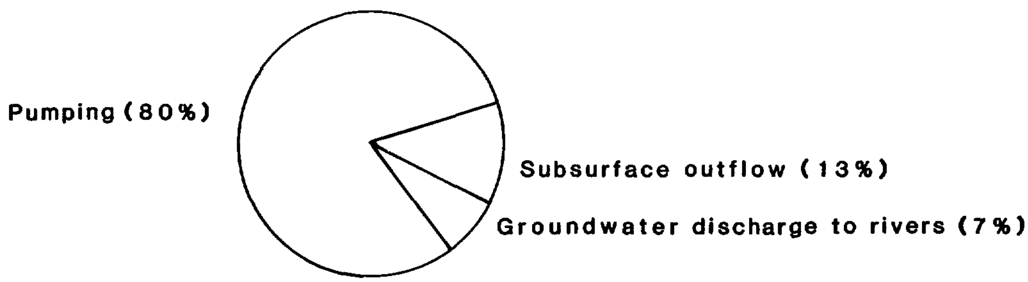


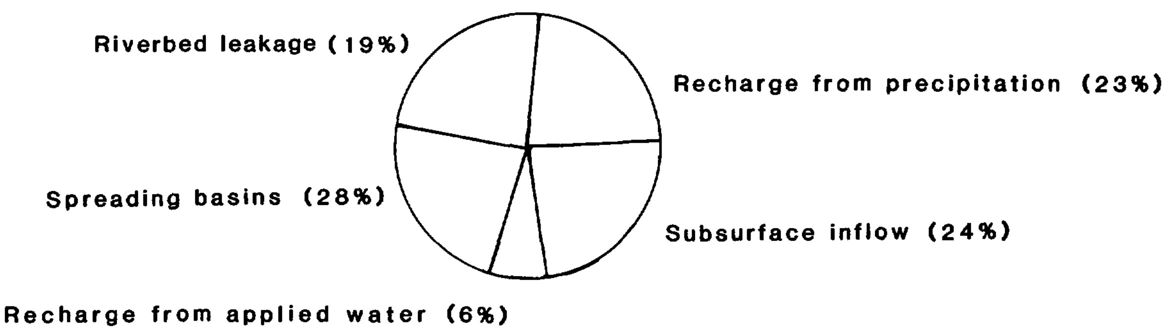
FIGURE A-12
SUMMARY OF COMPONENTS
OF THE GROUNDWATER BUDGET
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

Groundwater outflow



Total annual groundwater outflow averaged
216,000 ac-ft/yr from October 1977 to June 1984

Groundwater sources



Total annual groundwater inflow averaged
270,000 ac-ft/yr from October 1977 to June 1984

FIGURE A-13
RELATIVE MAGNITUDE OF COMPONENTS
OF THE GROUNDWATER BUDGET
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

be in a rough state of dynamic equilibrium, with the sources of groundwater in the basin being approximately balanced by the withdrawals and outflows from the basin.

An independent check on the general accuracy of these water budget calculations was made by examining the change in water table elevations during the 5-year period from 1977 to 1982 (the most recent period for which regional water table maps are available) based on the relationship:

$$\Delta S = \sum_i \Delta h_i \, S_{yi} \qquad \text{(A-10)}$$

where, ΔS = the change in storage

Δh_i = the change in water table elevation in a discrete region of the basin

S_{yi} = the specific yield in region i, and

$\sum_i$ = represents the sum over all of the distinct regions (in this case sections).

The change in storage was estimated using values of S_y determined by the CDWR (1966) based on lithology, and revisions of those values made during the groundwater flow model calibration described in Section A.5. The change in the water table for each section was estimated from available LACFCD water table maps (1977 and 1982). These calculations resulted in an increase in storage of about 313,800 ac-ft or an average annual increase of 62,800 ac-ft/yr for the 5-year period. The water budget method during the same 5 years leads to an estimated increase in storage of about 196,100 ac-ft or about 39,200 ac-ft/yr. The water budget estimate is about 38 percent less than the change in storage estimate, which is probably within the accuracy of the calculations. For example, the difference in the two estimated values of accumulated change in storage amounts to about 9 percent of the total estimated inflow during this period, or about 13 percent of the total pumping for this period. Similarly, the difference represents about 10 feet of error in the average water table elevation differences. This is small compared to the contour intervals of from 10 to 50 feet from which the change in water table elevations was estimated. Alternatively, this discrepancy may imply that the specific yield estimates are about 40 percent too high.

A.5 NUMERICAL MODEL ANALYSIS

The hydrogeology and groundwater flow conditions in the San Gabriel Basin are relatively complex. The water storage and transmitting properties of the alluvium are variable throughout the basin. The water budget of the basin consists of many inflow and outflow components, which vary spatially. The complexities of the hydrogeology and groundwater flow conditions can be understood and analyzed best by the use of numerical modeling techniques. The CDWR (1966) developed a two-dimensional groundwater flow model of the basin to assist them in understanding the basin's response to stresses such as recharge and pumping. The three-dimensional model developed by the U.S. Geological Survey (USGS) (McDonald and Harbaugh, 1984) has been selected for this investigation to evaluate groundwater flow conditions in the San Gabriel Basin.

This code represents an improvement of the two- and three-dimensional finite-difference models of Trescott (1975) and Trescott, Pinder, and Larson (1976). The model program uses a modular programming structure: similar programming functions are grouped together and specific computational and hydrologic options are grouped together so that each option is independent of the other options. Because of this structure, new options can be added without the necessity of changing existing subroutines. The major options that are presently available include procedures to simulate the effects of wells, recharge, rivers, drains, evapotranspiration, and general head boundaries. The solution algorithms available include two iterative techniques: the Strongly Implicit Procedure (SIP) and the Slice-Successive Overrelaxation method (SSOR). The model may be used for either two- or three-dimensional applications.

A.5.1 APPROACH

The modeling approach employed as a part of the San Gabriel SSP involves two types of model analysis. The first analysis involves the development of a two-dimensional cross-sectional model to evaluate the vertical dynamics of groundwater flow in the San Gabriel Basin. Building upon this analysis, a three-dimensional model of the basin has been constructed to evaluate groundwater flow conditions in the basin.

At this stage in the investigation of the San Gabriel Basin, it is important to develop an understanding of the hydrogeology and groundwater flow conditions on a regional scale. The regional scale evaluation is used to assess the large-scale hydrogeologic features and water budget components which affect the general rate and direction of groundwater movement in the basin. The regional scale of analysis necessarily requires the averaging of smaller scale hydrogeologic features (and properties) and water budget components over large areas. The results of the regional scale analysis, however, provide a foundation for conducting further, more refined analysis at smaller scales. For example, the results of a regional groundwater flow model may be used to provide boundary conditions for a smaller scale and refined groundwater flow model which can be used to investigate groundwater flow paths through an area having highly variable hydrogeologic properties. The goal of this report is to develop a regional scale groundwater flow model for the San Gabriel Basin which will provide the framework for conducting more refined and local scale modeling during the RI/FS.

A.5.2 TWO-DIMENSIONAL MODEL ANALYSIS

Upon preliminary evaluation of the available hydrogeologic data in the San Gabriel Basin, one deficiency becomes apparent: a lack of the information needed to describe the vertical components of flow in the basin. This missing information includes vertical hydraulic gradients and vertical hydraulic conductivity. Information about vertical hydraulic gradients is missing because most, if not all, of the hydraulic head data comes from large production wells that are typically screened over large intervals of the aquifer. Measurements of the elevation of the water table taken from these wells represent a vertical averaging of the hydraulic head throughout the screened interval. In conjunction with this uncertainty over the vertical distribution of hydraulic head is the resulting uncertainty associated with the boundary conditions which will have to be specified for the numerical simulation domains.

There is also a lack of information on the magnitude of vertical hydraulic conductivity in the basin. The estimates of hydraulic conductivity based on pumping test results and lithologic descriptions, described previously, are estimates of horizontal hydraulic conductivity. It is the rule rather than the exception for alluvial aquifers such as the San Gabriel basin to have vertical hydraulic conductivities that are from several times to several orders of magnitude less than the horizontal hydraulic conductivity (Bouwer, 1978).

Because the effects of these parameters are seen primarily in the vertical flow system, a two-dimensional model of a vertical cross section provides an appropriate and efficient mechanism for evaluating these effects. In addition, because a two-dimensional model in general requires less computer storage and execution time, it is also a useful tool for the preliminary evaluation of the data required for the more costly and time-consuming three-dimensional model. The parameters identified for preliminary evaluation using the two-dimensional model include horizontal and vertical hydraulic conductivity distributions, boundary conditions, and recharge.

A.5.2.1 Selection of Cross-Section and Grid Discretization

The two-dimensional model represents a vertical slice out of the three-dimensional flow domain. Flow in a portion of a three-dimensional flow regime is accurately described as two-dimensional if that portion of the domain is a vertical plane, across which no horizontal flow occurs perpendicular to that plane. An examination of recent water level maps (LACFCD, 1960-1982) reveals that groundwater withdrawals from the basin have affected the natural flow patterns; extensive cones of depression have developed around some of the pumping centers. The presence of these cones of depression make it difficult to find a vertical plane across which horizontal flow does not occur. However, during the 1930's and 1940's the perturbations, caused by pumping, of the natural flow system were less pronounced. The water table maps for the fall of 1933 and 1944, for example, indicate that the San Gabriel River is approximately coincident with a streamline that traverses the length of the valley.

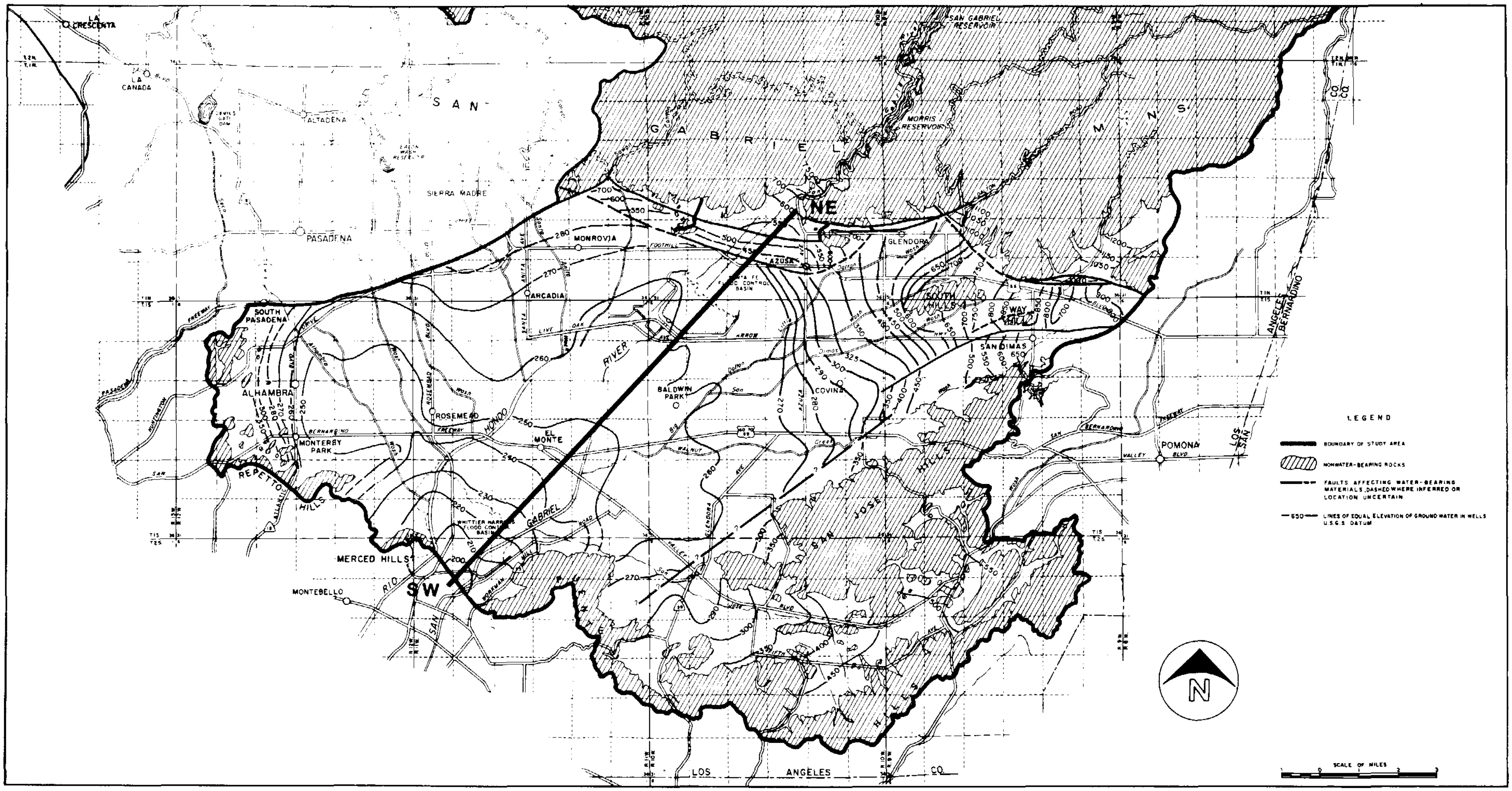
Figures A-14 and A-15 show the Fall 1933 and 1944, respectively, water table maps and the streamline. If we assume that flow at depth in the basin follows patterns similar to those indicated by the water table map, the vertical plane below this streamline satisfies our criteria for two-dimensional flow. Figure A-16 shows the cross-section defined by this streamline.

This cross-section was represented by a block-centered finite difference grid, also shown in Figure A-16. The grid consists of 18 horizontal layers, each 150 feet thick, and 22 vertical columns, each 2,640 feet wide.

A.5.2.2 Modeling Approach

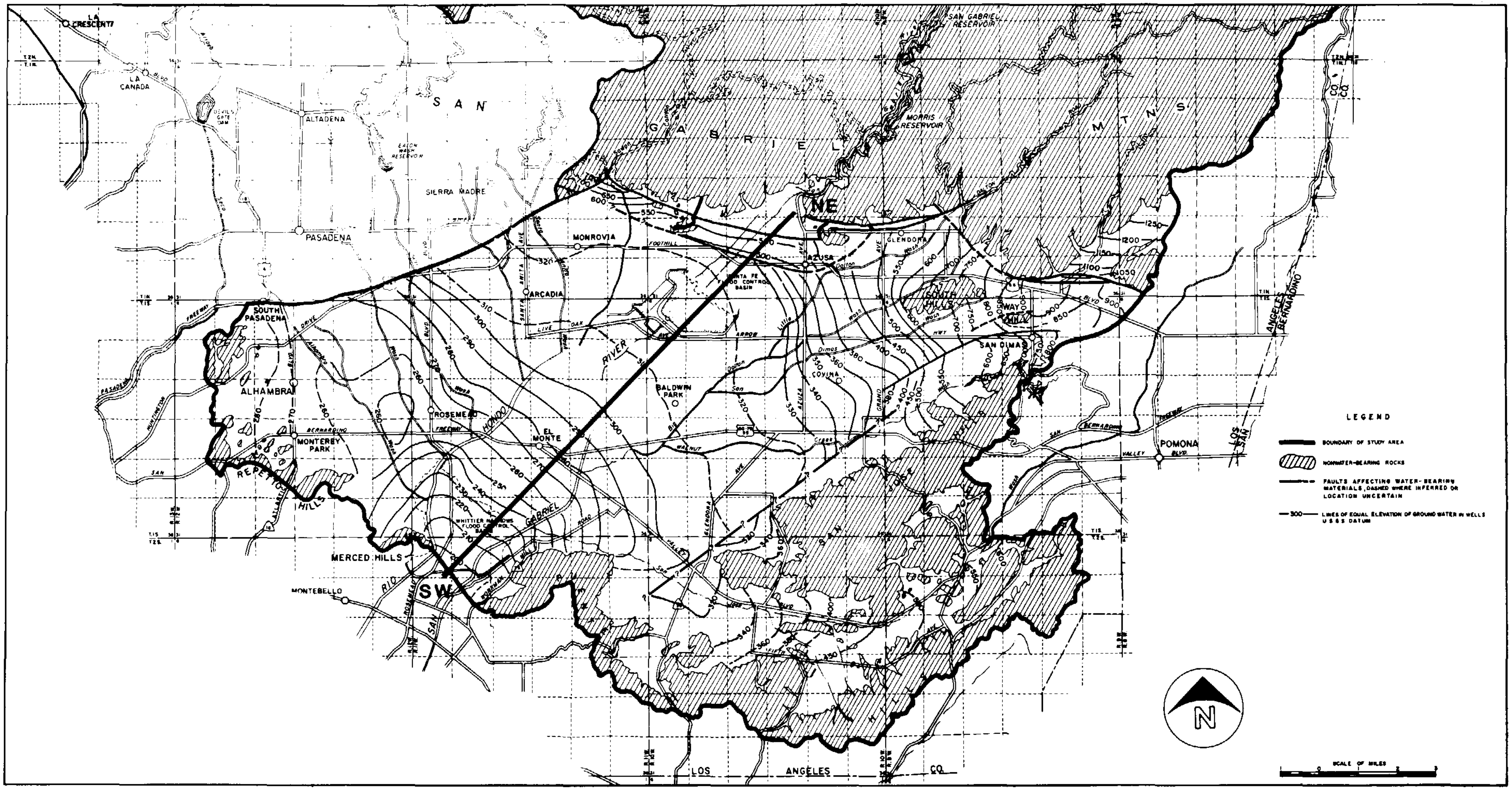
The two-dimensional modeling activities include simulation of steady flow of groundwater using a dual formulation of the problem. This dual formulation describes the groundwater flow system in terms of potentials (hydraulic head) and stream functions. This dual formulation was undertaken because recent work (Frind and Matanga, 1985; Fogg and Senger, 1985) has indicated that where the objective is the definition of migration paths and the identification of hydrogeologic parameters in the context of contaminant transport, stream functions can give results that are more useful than those obtained with potentials alone.

The water levels in the San Gabriel Basin are subject to seasonal variations that may be up to 100 feet (CDWR, 1966). Nonetheless, one may consider the system to be periodically and temporarily in a steady state condition. This assumption allows one to utilize a powerful tool in the analysis. We can use the numerical model to solve for hydraulic head and also for the stream function.



SOURCE: CDWR, 1966

FIGURE A-14
GROUNDWATER LEVELS
IN FALL 1933
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



SOURCE: CDWR, 1966

FIGURE A-15
GROUNDWATER LEVELS
IN FALL 1944
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

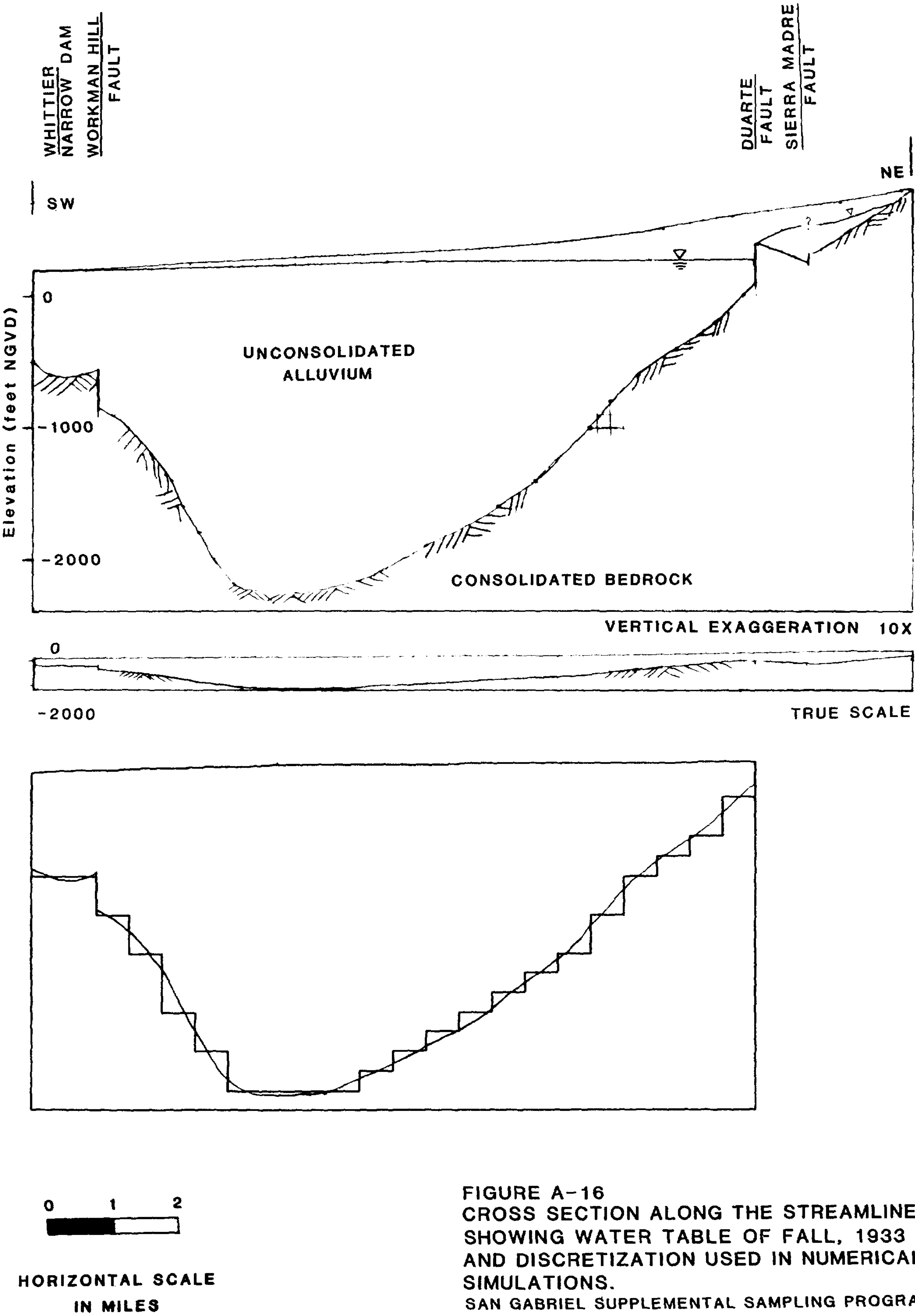


FIGURE A-16
CROSS SECTION ALONG THE STREAMLINE, SHOWING WATER TABLE OF FALL, 1933 AND DISCRETIZATION USED IN NUMERICAL SIMULATIONS.
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

A stream function can be defined as a function which is constant in value along a streamline. In addition, the total discharge (in terms of volume per unit width normal to the flow plane per unit time) between two streamlines is equal to the difference in stream functions corresponding to these lines. The use of stream functions is meaningful only in steady flow and in the absence of distributed sources and sinks within the flow domain. Point sources and sinks introduce no difficulty as they can be removed from the interior of the flow domain and treated as part of the boundary of the flow domain (Bear, 1979). The stream function, ψ, is related to the specific discharge by (Frind and Matanga, 1985):

$$q_x = - \frac{\partial \psi}{\partial y} \quad \text{and} \quad q_y = \frac{\partial \psi}{\partial x} \tag{A-11}$$

Combining these equations with Darcy's law:

$$\underline{q} = - \underline{\underline{K}} \, \nabla h \tag{A-12}$$

and the continuity equation:

$$\nabla \cdot \underline{q} = 0 \tag{A-13}$$

leads to the following governing equation for stream functions in two-dimensions where the coordinate axes are oriented along the principle directions of permeability (Frind and Matanga, 1985):

$$\nabla \cdot \frac{1}{|K|} \underline{\underline{K}} \nabla \psi = 0 \qquad \text{(A-14)}$$

where, $|K|$ is the determinant of the hydraulic conductivity tensor, $\underline{\underline{K}}$.

Because equation (A-14) is of the same form as the governing equation for groundwater flow, written in terms of hydraulic head:

$$\nabla \cdot \underline{\underline{K}} \nabla h = 0 \qquad \text{(A-15)}$$

the same numerical solution procedure can be used.

A.5.2.3 Analysis

A preliminary examination of the system was made using the water table configuration as the driving force, with the upper layer consisting of constant head nodes representing the water table for the fall of 1933. In a second phase of the analysis, an attempt was made to match the water table with simulated heads by varying the amount of recharge applied to the upper layer.

Boundary conditions are needed to define the potential or hydraulic head and the stream function on the boundary of the flow domain. Boundary conditions may be classified as either first type (Dirichlet) or second type (Neumann). The Dirichlet boundary conditions take the form (Frind and Matanga, 1985):

$$h = h(\Gamma) \quad \text{on } \Gamma_1 \qquad \text{(A-16)}$$

$$\psi = \psi(\Gamma) \quad \text{on } \Gamma_2 \qquad \text{(A-17)}$$

where Γ_1 and Γ_2 are parts of the domain boundary, Γ. Equation (A-16) represents a prescribed head boundary in the case of potential simulation. Equation (A-17) describes a boundary along which the value of the stream function is known. For example, the stream function will be constant along a no-flow boundary.

The Neumann type boundary conditions can be expressed in terms of the gradient of potential, $\underline{g}^h$, or stream function, $\underline{g}^\psi$, normal to the boundary, defined as (Frind and Matanga, 1985)

$$\underline{g}^h \cdot \underline{n} = (\underline{\underline{K}} \nabla h) \cdot \underline{n} \tag{A-18}$$

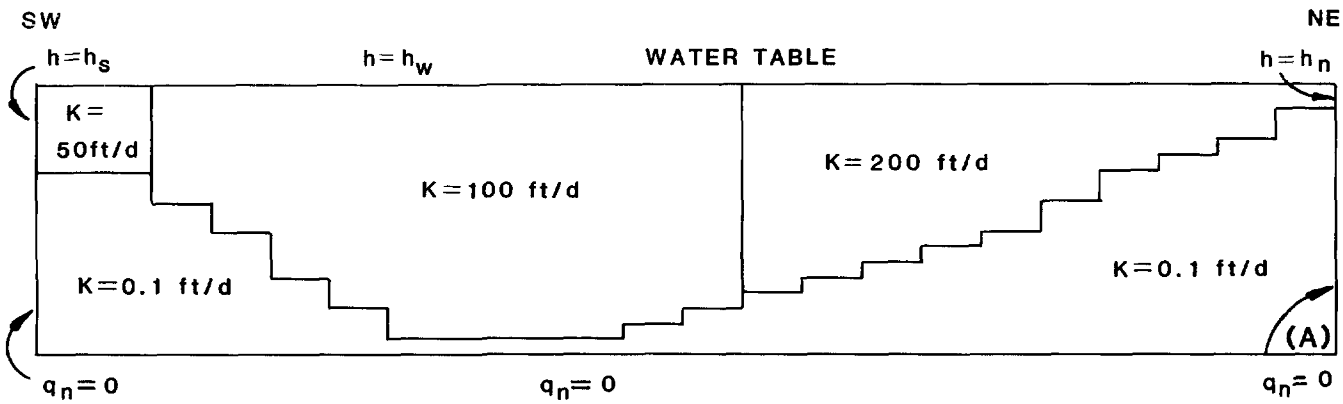
$$\underline{g}^\psi \cdot \underline{n} = (\frac{1}{|K|} \underline{\underline{K}} \nabla \Psi) \cdot \underline{n} \tag{A-19}$$

where $\underline{n}$ is a unit vector normal to the boundary. Equation (A-18) is the specified flux boundary condition for the potential formulation. Equation (A-19) can easily be shown (Frind and Matanga, 1985) to be equivalent to:

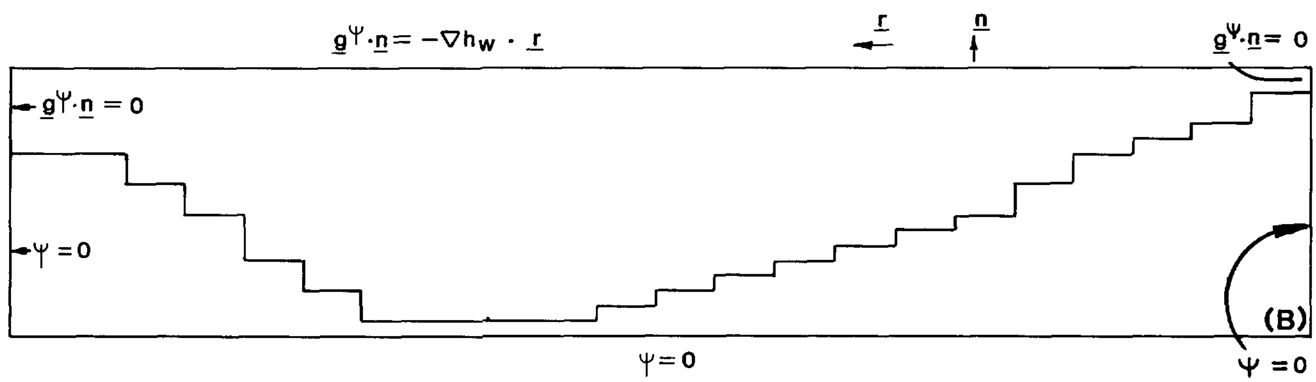
$$\underline{g}^\psi \cdot \underline{n} = - \nabla h \cdot \underline{r} \tag{A-20}$$

where $\underline{r}$ is the unit tangential vector. Therefore, after integration over the boundary of an individual model cell, the Neumann type boundary condition for stream functions can be expressed in terms of head differentials between nodes along the boundary (Fogg and Senger, 1985).

The boundary conditions used for the water table simulations of hydraulic head are indicated in Figure A-17. The upper layer consisted of Dirichlet type (specified heads), based on the 1933 water table. The northern and southern vertical boundaries of the alluvium were also treated as constant heads, assuming horizontal inflow and outflow (vertical equipotentials). The northern and southern boundaries of the bedrock and the bottom boundary were treated as Neumann type boundaries with no flow.



POTENTIAL SIMULATION DOMAIN WITH BOUNDARY CONDITIONS AND ORIGINAL HORIZONTAL HYDRAULIC CONDUCTIVITY ZONES



STREAM FUNCTION SIMULATION DOMAIN AND BOUNDARY CONDITIONS

LEGEND

HORIZONTAL SCALE
IN MILES

VERTICAL EXAGGERATION
4.5 x

FIGURE A-17
BOUNDARY CONDITIONS AND INITIAL HYDRAULIC CONDUCTIVITY ZONATION
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

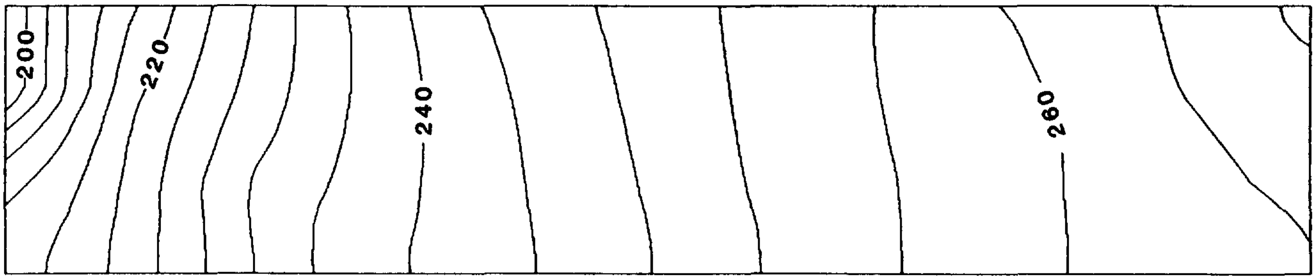
Figure A-17 also shows the boundary conditions specified for the simulation of stream functions. In this case the northern and southern boundaries of the bedrock and the bottom boundary were treated as Dirichlet type boundaries with a specified stream function value of zero. This corresponds with the constant flow (equal to zero) boundary of the head simulations. The remaining boundaries were treated as Neumann type boundary conditions.

The simulation domain was divided into four zones of hydraulic conductivity based on the analyses described in Section A.3.2. These conductivity zones are indicated in Figure A-17. The alluvial aquifer was subdivided into zones having hydraulic conductivity of 50, 100, and 200 ft/d, respectively. The fourth zone, the consolidated bedrock, was included to evaluate the hypothesis that because the hydraulic conductivity of the consolidated bedrock is significantly less than the hydraulic conductivity of the alluvium, the bedrock could be considered "nonwater-bearing" and does not greatly affect the groundwater flow system (CDWR, 1966). This zone was treated using values of hydraulic conductivity that ranged from 0 (the case of no flow in the bedrock) to 1 ft/d. The ratio of horizontal to vertical hydraulic conductivity (K_h:K_v) was varied over the range of 1:1 to 100:1.

The results of simulations in which the bedrock was modeled with hydraulic conductivity values of 0, 0.1, and 1.0 ft/d confirmed the hypothesis that the bedrock could be considered as "nonwater-bearing." For all three cases the simulated heads in the alluvium were nearly identical. More significantly, the stream function simulations indicated that only about 2 percent of the flow through the system was in the bedrock. In addition, the patterns of flow as defined by the streamlines were essentially identical in all three cases.

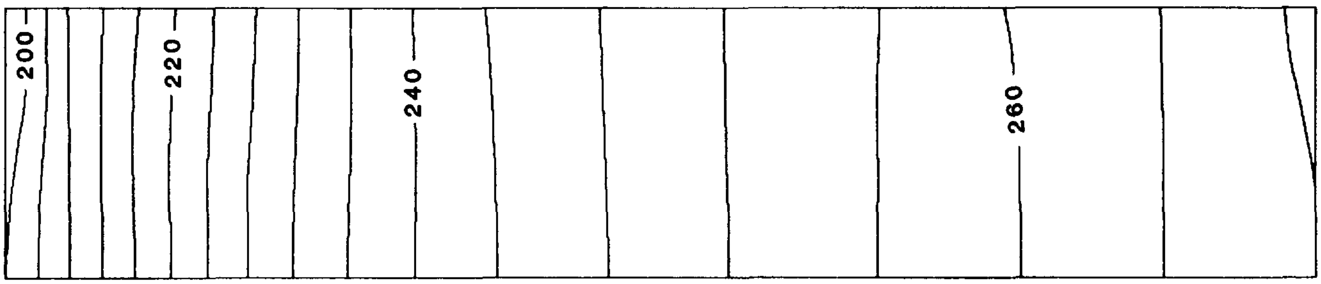
The results of simulations in which the ratios of horizontal to vertical hydraulic conductivity were 1:1, 2:1, 20:1, and 100:1 indicated that the anisotropy had a significant effect on the potential distribution. For example, the equipotentials for anisotropy ratios of 20:1 and 2:1 are shown in Figure A-18(a) and Figure A-18(b), respectively. The result, that lower vertical hydraulic conductivity values lead to greater vertical hydraulic gradients, is not surprising. Interestingly, however, the effect of the anisotropy on the flow pattern is not significant. In fact, the flow streamlines associated with the two potential simulations are virtually identical. This flow pattern is shown in Figure A-18(c). That this is so, can be understood by thinking of the increased vertical gradients being countered by the decreased vertical hydraulic conductivity, resulting in similar vertical flow components. Moreover, despite the distortion introduced by the exaggerated vertical scale, vertical components of flow are small compared to horizontal components.

The flow pattern shown in Figure A-18(c) shows two areas of rather pronounced upward flow which coincide with, and are probably caused by, the abrupt decreases in horizontal conductivity shown in Figure A-17. The abruptness of this decrease in conductivity is an artifact of the zonation in conductivity used in the model; the actual decrease in conductivity is probably more gradual. In order to evaluate to what extent these zones of upward flow are exaggerated by the artificial abruptness of the decrease in hydraulic conductivity, a series of simulations were made using a uniform value of conductivity in the alluvium. This value was determined from a weighted harmonic mean of the previous zonation to be approximately 100 ft/d. Figure A-19 shows the flow



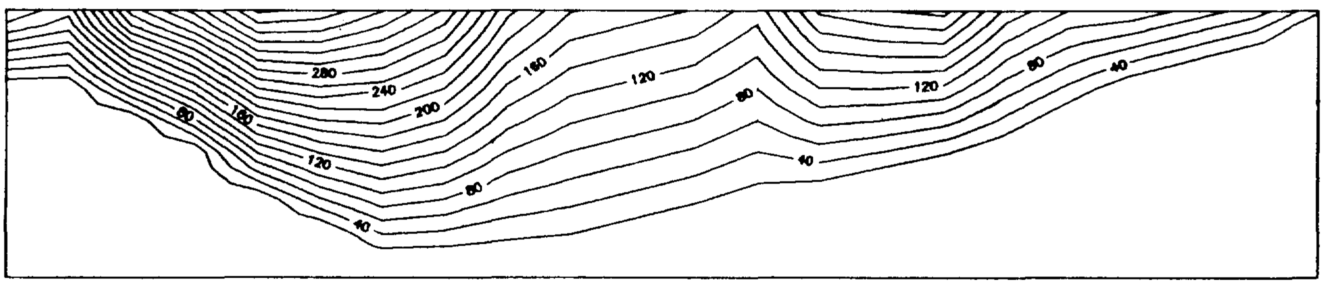
(A)

EQUIPOTENTIALS FOR $K_h/K_z=20$



(B)

EQUIPOTENTIALS FOR $K_h/K_z=2$



(C)

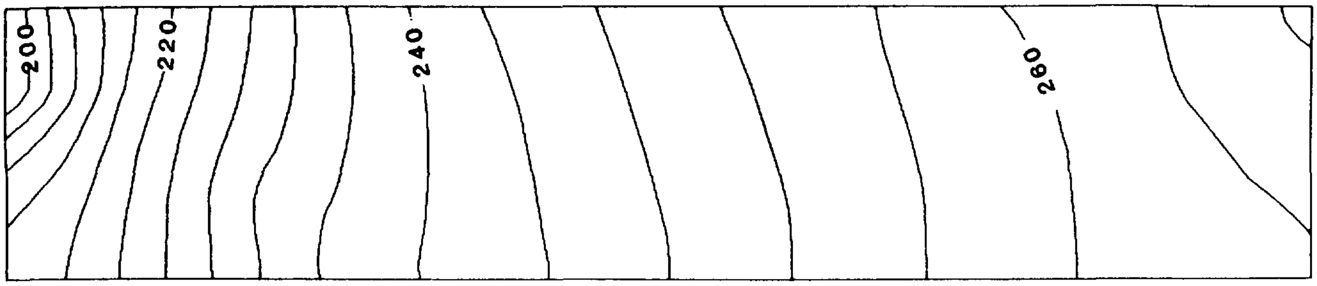
THE STREAM FUNCTIONS (SQUARE FEET PER DAY) CORRESPONDING WITH BOTH (A) AND (B).

LEGEND

HORIZONTAL SCALE
IN MILES

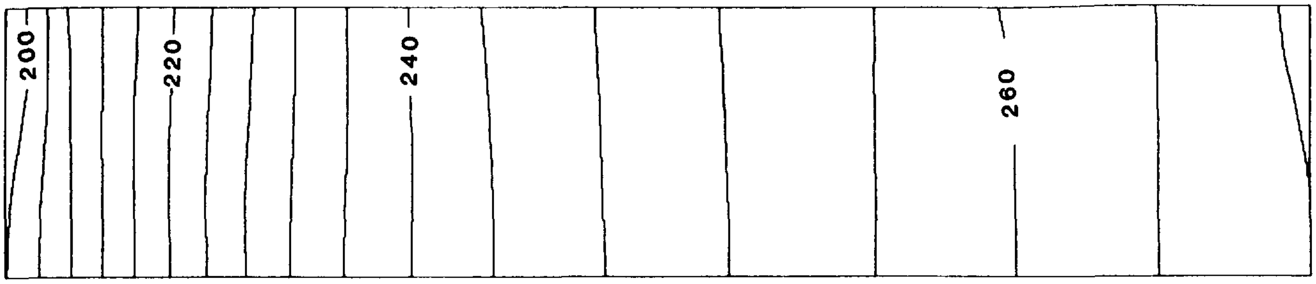
VERTICAL EXAGGERATION
4.5 x

FIGURE A-18
EQUIPOTENTIALS AND STREAM FUNCTIONS RESULTING FROM BOUNDARY CONDITIONS AND HYDRAULIC CONDUCTIVITY RELATIONSHIPS SHOWN IN FIGURE A-17
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



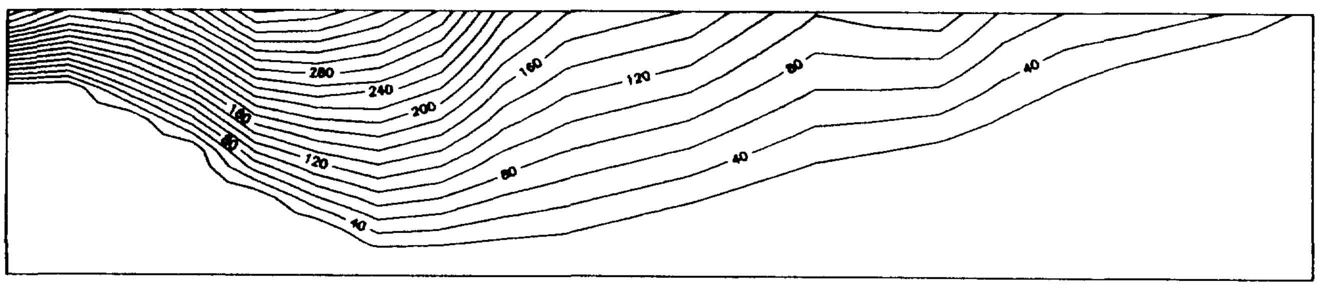
(A)

EQUIPOTENTIALS FOR $K_h/K_z=20$



(B)

EQUIPOTENTIALS FOR, $K_h/K_z=2$



(C)

STREAM FUNCTIONS (SQUARE FEET PER DAY) CORRESPONDING WITH (A) AND (B).

LEGEND

0 2 4

HORIZONTAL SCALE
IN MILES

VERTICAL EXAGGERATION
4.5 x

FIGURE A-19
EQUIPOTENTIALS AND STREAM FUNCTIONS RESULTING FROM THE BOUNDARY CONDITIONS SHOWN IN FIGURE A-17 USING AN EFFECTIVE HYDRAULIC CONDUCTIVITY FOR THE ALLUVIUM OF 100 FT/D

SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

pattern that results from this scenario. Both zones of upward flow are now less pronounced, especially the more northern one. Apparently, the original zonation does exaggerate the vertical flow in the vicinity of the interfaces. A more accurate representation of the basin would probably require a more gradational change in conductivity. Figure A-20 shows such a representation of hydraulic conductivity, based more rigorously on Figure A-9 and comprising 16 different conductivity zones in the alluvium. The flow pattern resulting from this refined zonation of conductivity is presented in Figure A-21.

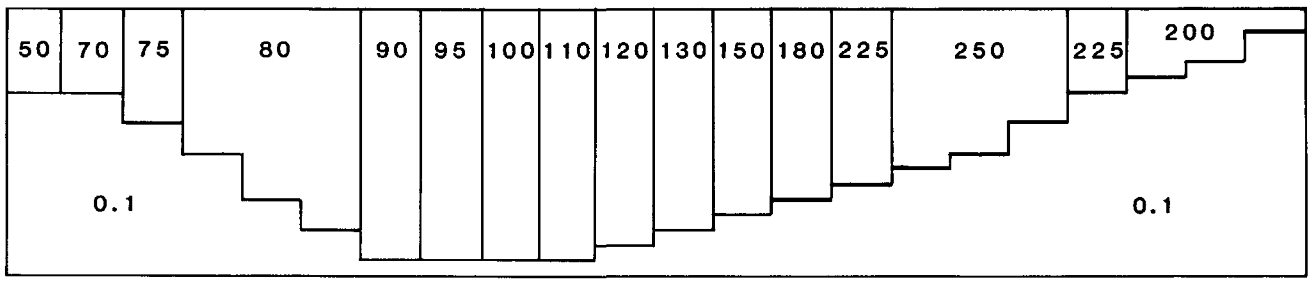
Finally, this phase of the simulations considered the effects of the vertical gradient at the southern boundary by assigning a Dirichlet type condition (specified head) with a vertical gradient of 0.02. The resulting potential and streamline distributions indicated that the model was not greatly sensitive to this change.

The following conclusions can be drawn from the simulations summarized above:

- The nature and magnitude of flow in the consolidated bedrock does not appreciably affect the flow in the unconsolidated alluvium.

- The flow pattern resulting under these boundary conditions is sensitive to the magnitude and distribution of horizontal hydraulic conductivity along the cross-section.

- For the configurations simulated, the resulting flow pattern in the alluvium is not greatly sensitive to the ratio of horizontal to vertical hydraulic conductivity. This may not remain the

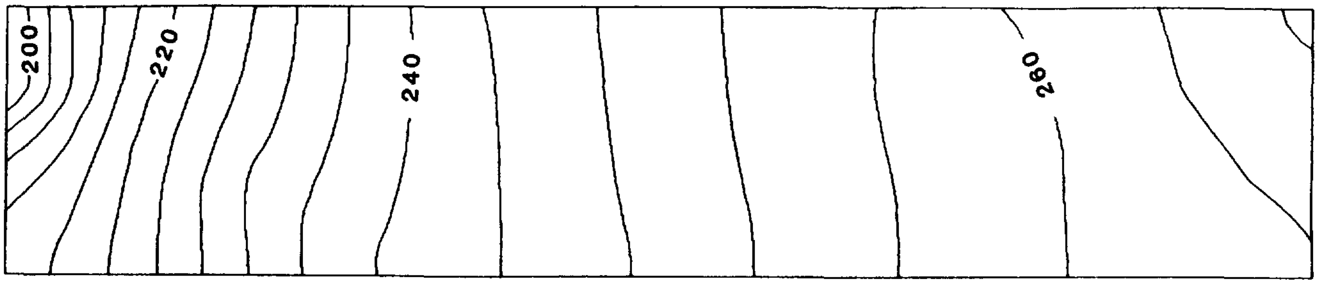


LEGEND

HORIZONTAL SCALE
IN MILES

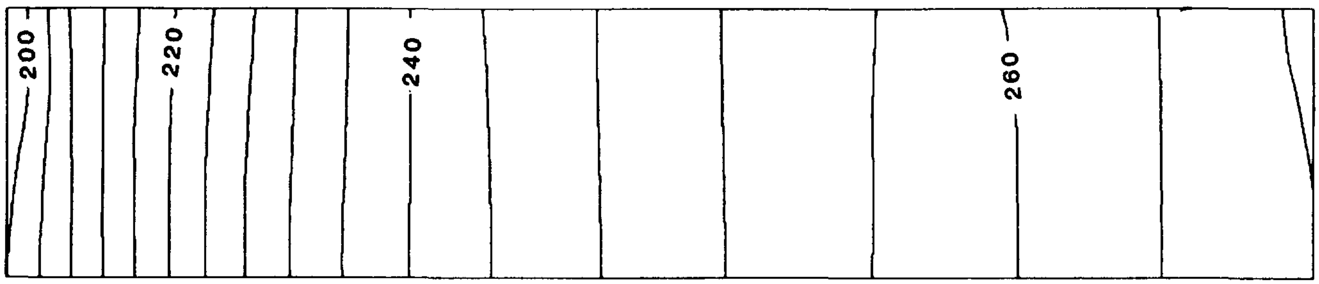
VERTICAL EXAGGERATION
4.5 x

FIGURE A-20
REFINED ZONATION OF HORIZONTAL HYDRAULIC CONDUCTIVITY, VALUES IN FT/D
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



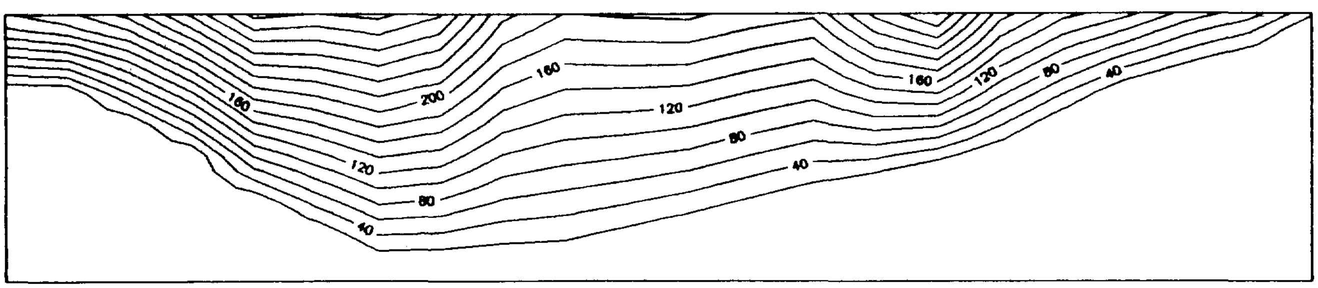
(A)

EQUIPOTENTIALS FOR $K_h/K_z=20$



(B)

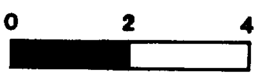
EQUIPOTENTIALS FOR $K_h/K_z=2$



(C)

STREAM FUNCTIONS (SQUARE FEET PER DAY) CORRESPONDING WITH (A) AND (B).

LEGEND



HORIZONTAL SCALE
IN MILES

VERTICAL EXAGGERATION
4.5 x

FIGURE A-21
EQUIPOTENTIALS AND STREAM FUNCTIONS RESULTING FROM THE BOUNDARY CONDITIONS SHOWN IN FIGURE A-17, USING THE HYDRAULIC CONDUCTIVITY ZONATION SHOWN IN FIGURE A-20
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

case in transient simulations with interior stresses or where the derivative of horizontal conductivity with respect to depth (dK_x/dz) is non-zero.

- The simulation domain is not greatly sensitive to the magnitude of the vertical gradient of the Dirichlet type (specified head) boundary condition along the southern (and probably the northern) boundary.

- The use of the dual formulation of potential and stream functions is helpful because the stream functions depict the actual flow lines, making the results easier to interpret. This is especially valuable where very different equipotential patterns can result in similar flow paths, as in Figure A-21; and where very similar equipotentials, Figures A-18(b) and A-19(b), result in somewhat different flow paths, as seen in Figures A-18(c) and A-19(c).

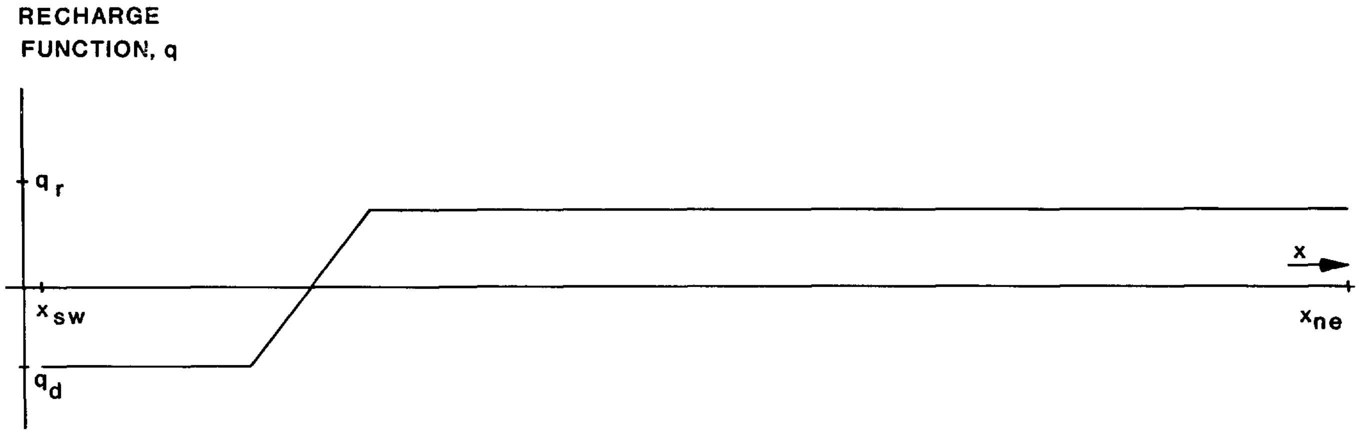
A.5.2.4 Recharge Simulations

The preceding analysis provides useful insights into the relative importance of the data gaps to the performance of the steady state model. However, because of the reliance on a Dirichlet type (specified head) boundary condition for the upper layer in the potential simulations, the model did not explicitly record the dynamics of surface water - aquifer interactions. It is known, for example, that along the upper reaches of the San Gabriel River, because of the high permeability of the channel bottom, significant percolation of precipitation and stream flow can occur. The reach of the river near Whittier Narrows is known to be an area of groundwater discharge to the San Gabriel River, so-called "rising water". In addition, because of the shallow depth to water, this has been an area of extensive pumping and relatively high evapotranspiration (CDWR, 1966).

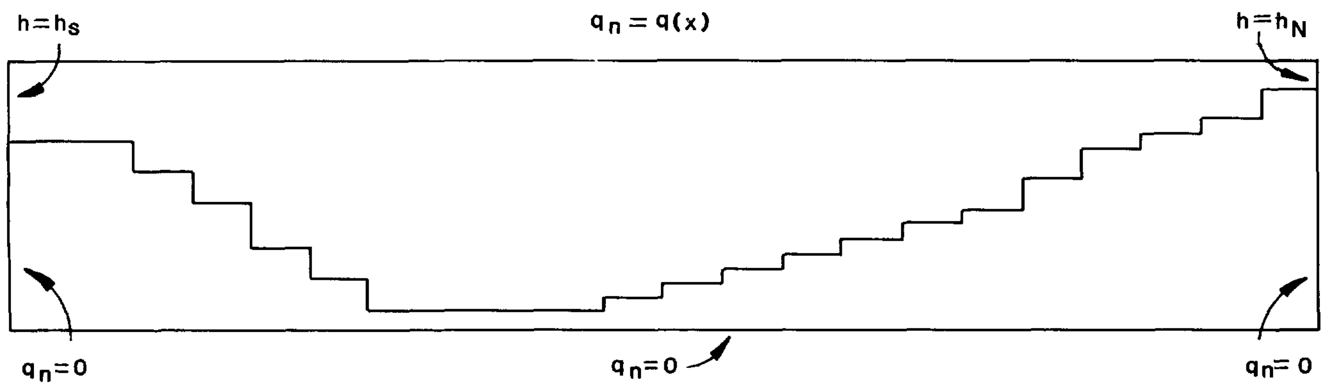
In order to explicitly incorporate these features into the two-dimensional model, the boundary conditions were reformulated. For the potential simulations, the upper layer was assigned Neumann type boundaries (specified flux). These specified fluxes, which were determined during the calibration process, were then used to define the Dirichlet type boundary conditions for the stream function simulations. Figure A-22 shows the nature of the recharge function and the boundary conditions used for this phase of the simulations.

The calibration strategy was to vary the values of recharge, q_r, and discharge, q_d, until the best match was obtained between the simulated heads and the 1933 water table. This calibration process was expedited by using an automatic parameter estimation technique similar to the methods of Cooley (1977). The objective function of the technique is to minimize the sum of the squared difference between the observed and simulated heads. Sensitivity coefficients, derivatives of simulated heads with respect to the parameter(s) of interest, are calculated by the variational technique. These sensitivity coefficients are then employed in a first order Taylor-series expansion to approximate the simulated heads at the next iteration. Using this formulation, the "optimal" parameter(s), those that minimize the sum of squared residuals, are then determined implicitly by a direct solver.

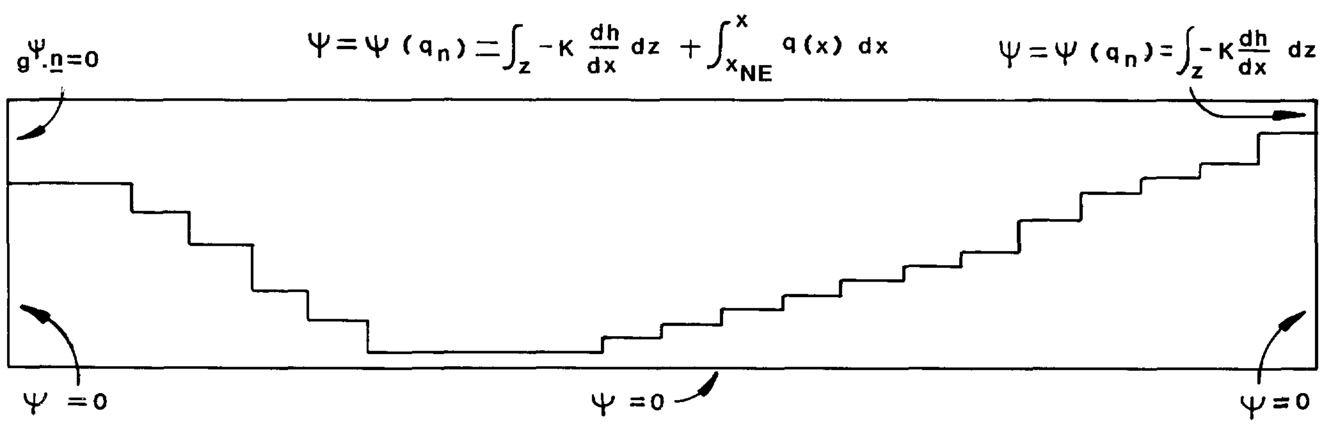
The final values of the calibration parameters were found to be q_r = 2 ft/yr and q_d = -10 ft/yr. The equipotentials and streamlines resulting from these values are shown in



THE RECHARGE FUNCTION. DISCHARGE FLUX=q_d, RECHARGE=q_r



BOUNDARY CONDITIONS FOR THE POTENTIAL SIMULATION DOMAIN



BOUNDARY CONDITIONS FOR THE STREAM FUNCTION SIMULATION DOMAIN

HORIZONTAL SCALE
IN MILES
VERTICAL EXAGGERATION
4.5 x

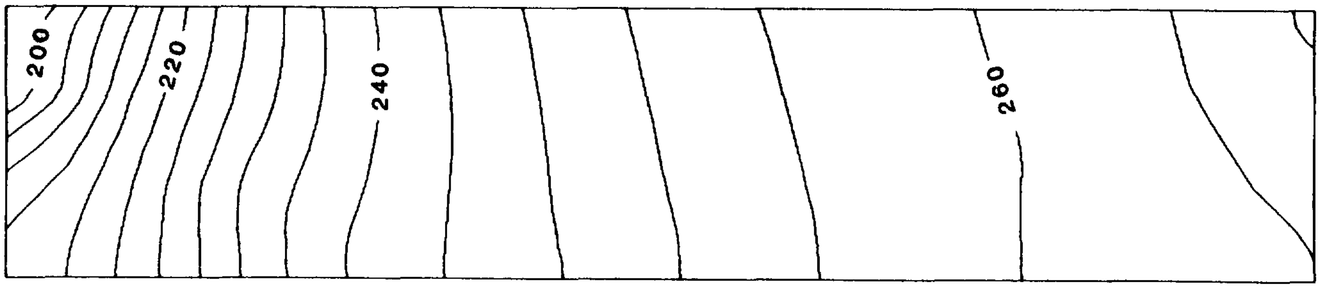
FIGURE A-22
THE RECHARGE FUNCTION
AND BOUNDARY CONDITIONS
FOR INCORPORATING SURFACE RECHARGE
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

Figure A-23. The simulation using the refined conductivity zonation and an anisotropy ratio of $K_h/K_v = 2$ gave the best results, with a root mean squared error (RMSE) of 1 foot. The simulated and observed heads are compared in Figure A-24. The match was not quite as good for an anisotropy ratio of $K_h/K_v = 20$; the RMSE was about 2 feet. However, the streamlines for these two cases were virtually identical. Interestingly, the refined conductivity zonation simulations yielded slightly better results than the original zonation, where the RMSE was 1.2 feet. But again, the streamline patterns were quite similar.

Because these simulations were steady-state, the values of the recharge and discharge fluxes and hydraulic conductivity determined during the calibration are only relative. That is to say that for any given set of values the solution to the steady-state equations will be unchanged if both q and K are multiplied by the same constant. Nevertheless, it is interesting to note that the values determined for discharge and recharge agree rather well with those determined independently by simple groundwater budget calculations. This indicates that the estimates of hydraulic conductivity are probably of the right order of magnitude.

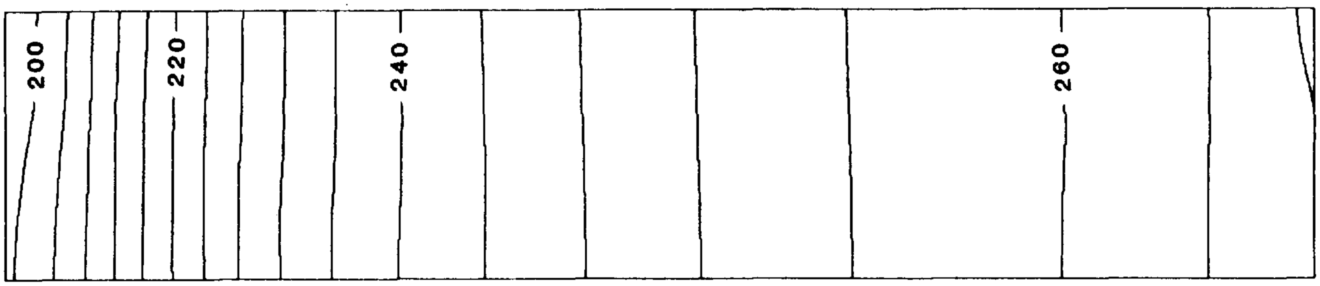
A.5.3 THREE-DIMENSIONAL MODEL ANALYSIS

The results of the two-dimensional model analysis described above indicate the potential for vertical flow in the basin. However, the two-dimensional cross-sectional model can not account for the horizontal components of flow, except along its conceptual streamline. A three-dimensional model analysis provides a convenient tool for integrating the voluminous amounts of data that have been collected and analyzed. These integrated data sets may be used to study the hydraulic



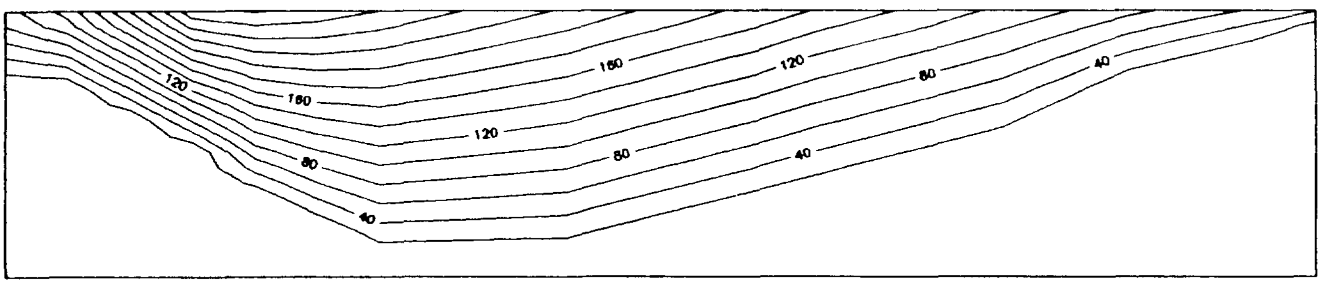
(A)

EQUIPOTENTIALS FOR $K_h/K_z=20$



(B)

EQUIPOTENTIALS FOR $K_h/K_z=2$



(C)

STREAM FUNCTIONS (SQUARE FEET PER DAY) CORRESPONDING WITH (A) AND (B).

0 2 4

HORIZONTAL SCALE
IN MILES

VERTICAL EXAGGERATION
4.5 x

FIGURE A-23
EQUIPOTENTIALS AND STREAM FUNCTIONS RESULTING FROM THE BOUNDARY CONDITIONS SHOWN IN FIGURE A-22
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

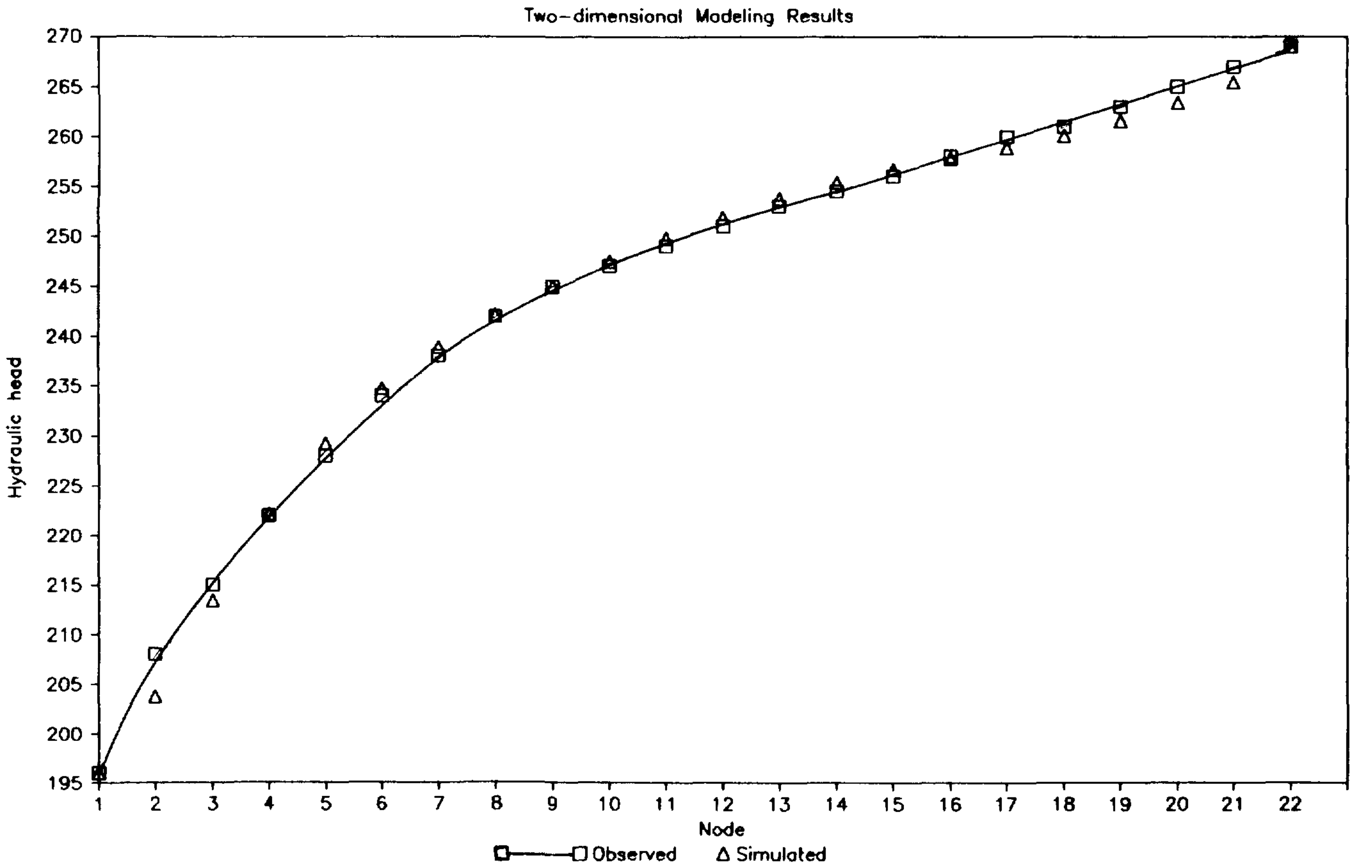


FIGURE A-24
COMPARISON OF SIMULATED WATER TABLE AND THE KNOWN WATER TABLE OF FALL, 1933
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

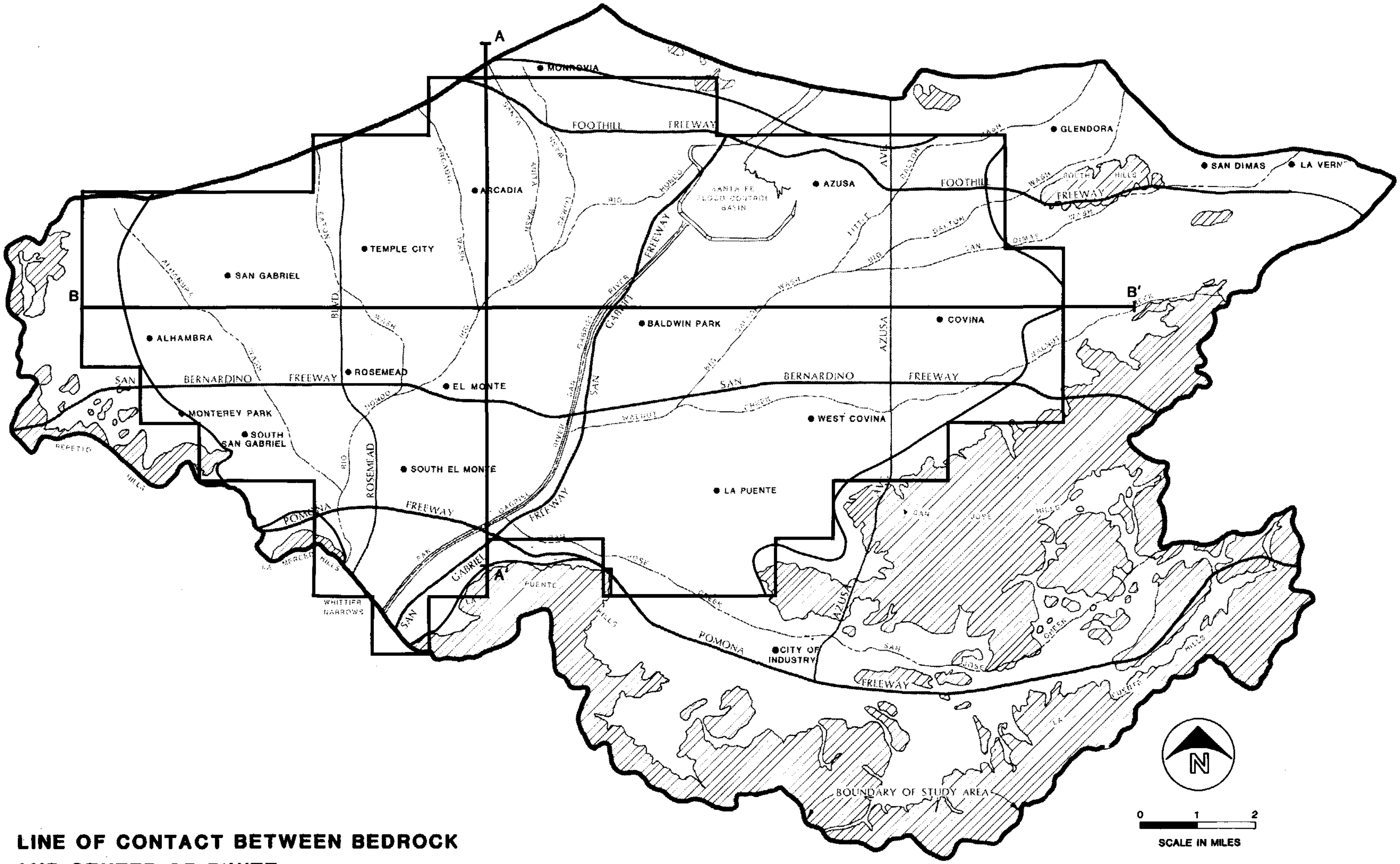
behavior of the entire groundwater system as a function of the individual components considered together.

The objective of the three-dimensional modeling task is to develop a numerical model that simulates the observed responses of the system to recharge and discharge. Such a model will allow the accomplishment of the following tasks on a regional scale:

- Evaluation of the relative importances of the uncertainties in the data
- Identification of significant data gaps
- Evaluation of management alternatives dealing with contaminated groundwater
- Identification of flow paths and rates
- Identification of hydraulically isolated "sub-basins" which might be used in pilot studies of clean-up techniques

A.5.3.1 Selection of Model Area and Grid Discretization

The analyses of the regional hydrogeology, discussed in Section A.2, provide the basis for the selection of the model area. The model area is shown in Figure A-25. The hydrologic boundaries of the modeled area are the Raymond fault on the northwest; the Duarte fault on the north; the bedrock high in the vicinity of of South Hills to the northeast; the tertiary bedrock comprising the San Jose hills to the southeast, and the Repetto and Merced hills to the west and southwest; and the mouth of Puente Valley and Whittier Narrows to the south.



LEGEND

LINE OF CONTACT BETWEEN BEDROCK AND CENTER OF FINITE DIFFERENCE LAYER 1

EXTENT OF AQUIFER IN FINITE DIFFERENCE LAYER 1

A—A' LINE OF CROSS SECTION ON FIGURE A-27

NONWATER-BEARING ROCK

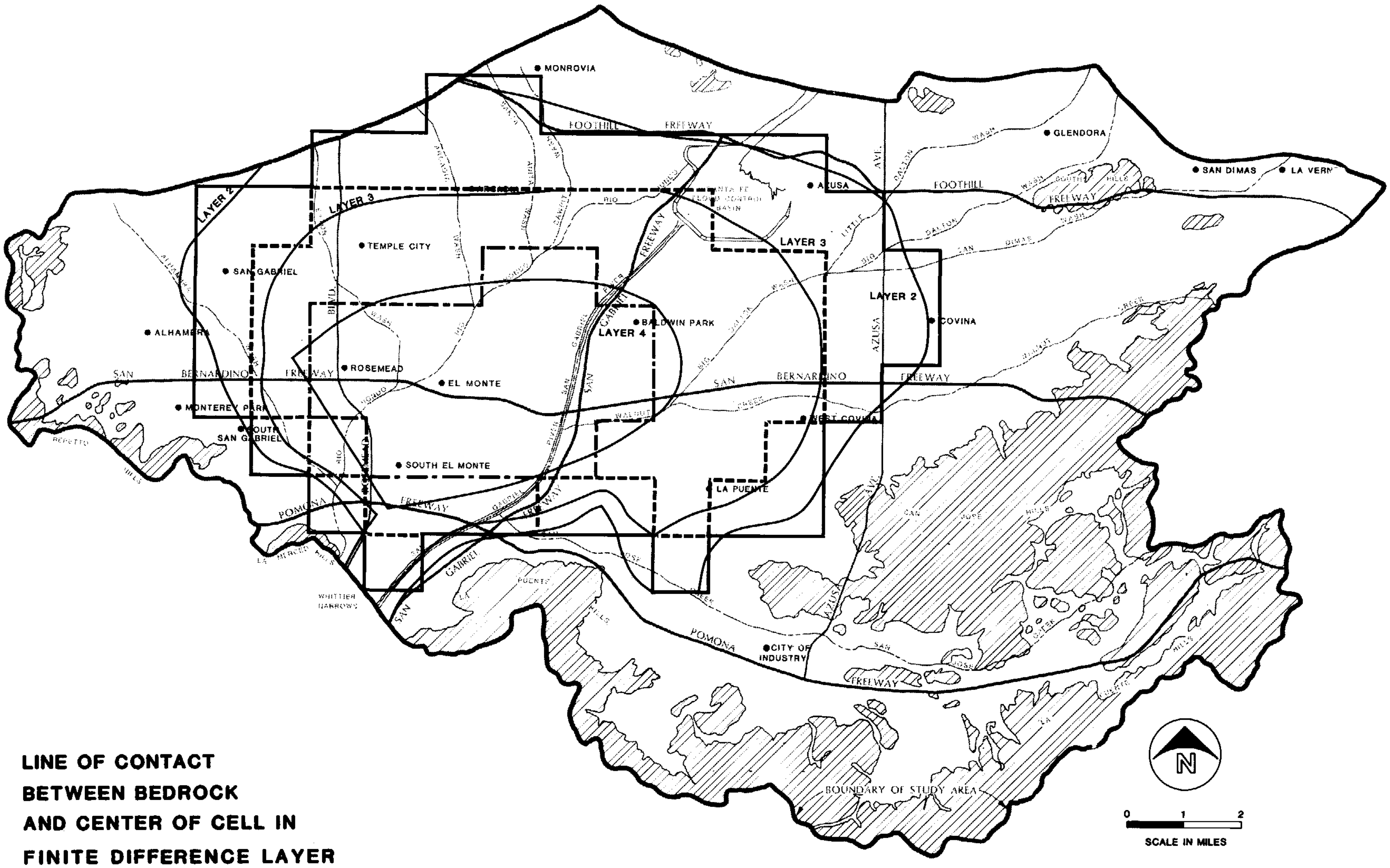
FIGURE A-25
HORIZONTAL DISCRETIZATION OF LAYER 1
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

In the horizontal plane, the model area was discretized into a block-centered finite-difference grid. This grid consists of 17 columns and 11 rows of cells. Each cell is a square, one mile on a side. There are 112 active cells inside the model area in the upper layer. Cells which occupy bedrock material or are outside of the boundaries are inactive.

In order to account for the vertical variation in the basin, the horizontal discretization was applied to 4 layers. The upper layer or layer 1 is 400 feet thick. Layers 2, 3, and 4 are 500 feet, 600 feet, and 900 feet thick, respectively. Because the land surface elevation and water table elevations are higher in the eastern part of the basin, all four layers are tilted so that they dip to the west at a slope of approximately 12.8 ft/mile. Figures A-26 and A-27 depict the discretization of the model area.

A.5.3.2 Modeling Approach

As discussed previously, there are large seasonal and annual fluctuations in the water table elevations in the basin. These temporal changes are significant enough to suggest that they are important factors in determining flow directions and rates. Consequently, the assumption of steady-state conditions is inappropriate and solutions to a transient flow problem must be used. The absence of steady-state conditions precludes the simulation of streamlines as was done in the two-dimensional analysis. The three-dimensional simulations of groundwater flow are therefore restricted to transient simulations of hydraulic head. The solutions of hydraulic head are subsequently used to calculate flow rates and directions using Darcy's law.



LEGEND

LINE OF CONTACT BETWEEN BEDROCK AND CENTER OF CELL IN FINITE DIFFERENCE LAYER

EXTENT OF AQUIFER IN FINITE DIFFERENCE

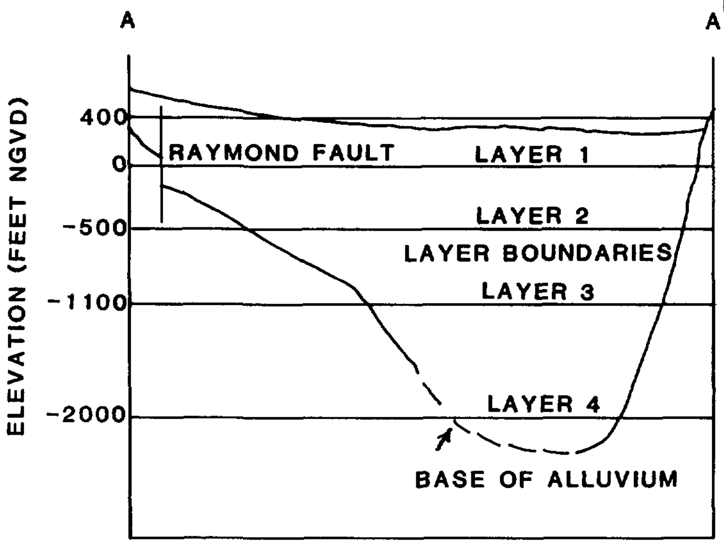
LAYER 2

LAYER 3

LAYER 4

NONWATER-BEARING ROCK

FIGURE A-26
HORIZONTAL DISCRETIZATION OF LAYERS 2, 3 AND 4
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



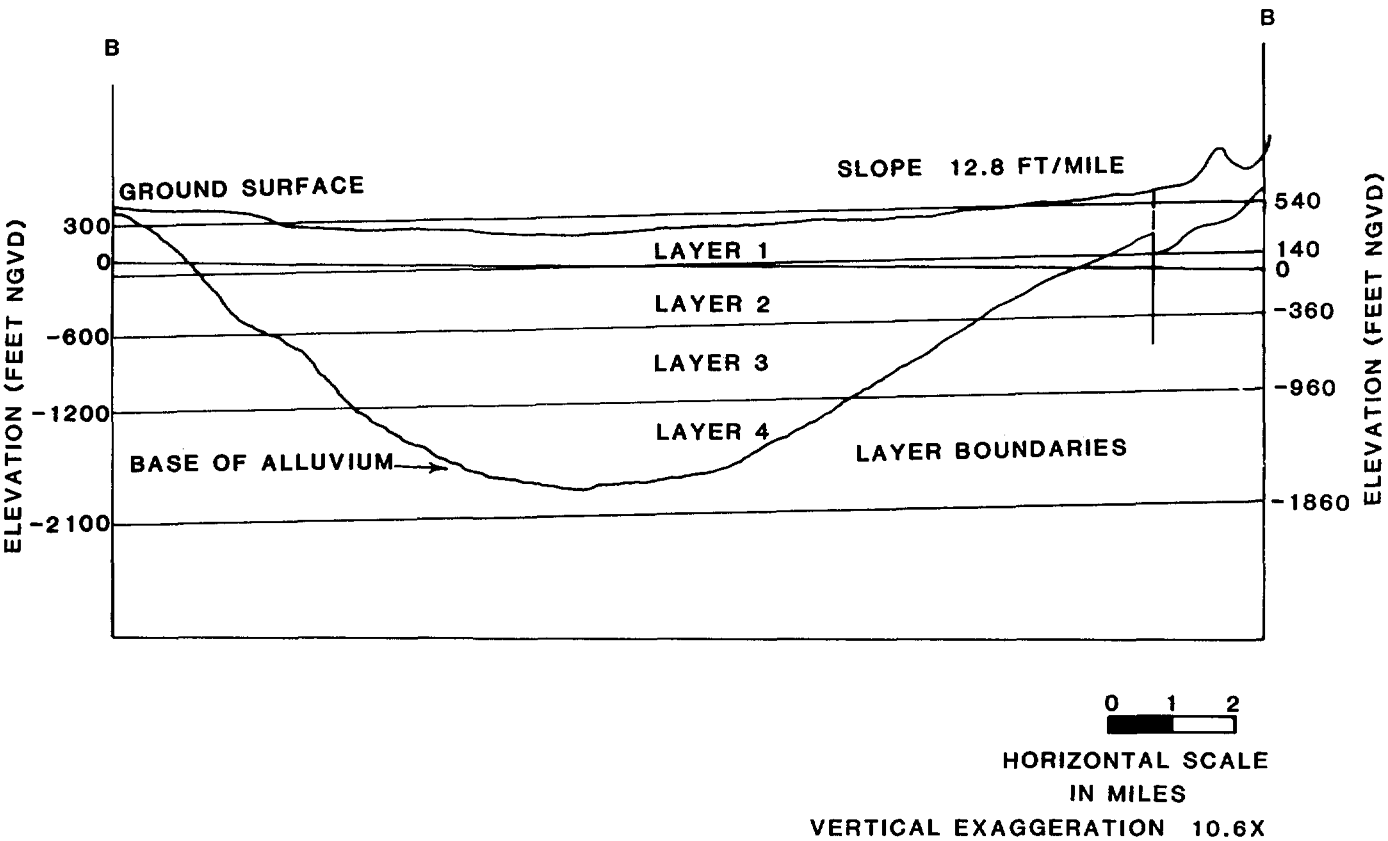


FIGURE A-27
VERTICAL DISCRETIZATION
OF THE MODEL AREA
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

A.5.3.3 Description of Model Input Data Sets

This section describes the data sets used in the three-dimensional numerical model analysis. The San Gabriel basin was modeled with consideration give to:

- Subsurface inflow and outflow, i.e., boundary conditions

- Recharge from precipitation, streambed percolation, and spreading grounds

- Heterogeneous and anisotropic hydraulic conductivity

- Heterogeneous specific yield

- Groundwater discharge to rivers

- Groundwater pumping

Subsurface flow into the model area occurs across the Raymond fault; the Duarte fault; the Glendora, Way Hill, and San Dimas basins; and Puente basin. Subsurface flow leaves the basin through Whittier Narrows. These conditions were simulated using the MODFLOW general-head boundary package. This package requires the specification of the head outside the model area, and determines the rate of inflow to the model area based on Darcy's law, as follows:

$$Q_i = \frac{KA}{\Delta \ell} (h_b - h_i) \tag{A-21}$$

where, Q_i = flow rate into (or out of) the model area

K = hydraulic conductivity

A = cross sectional area

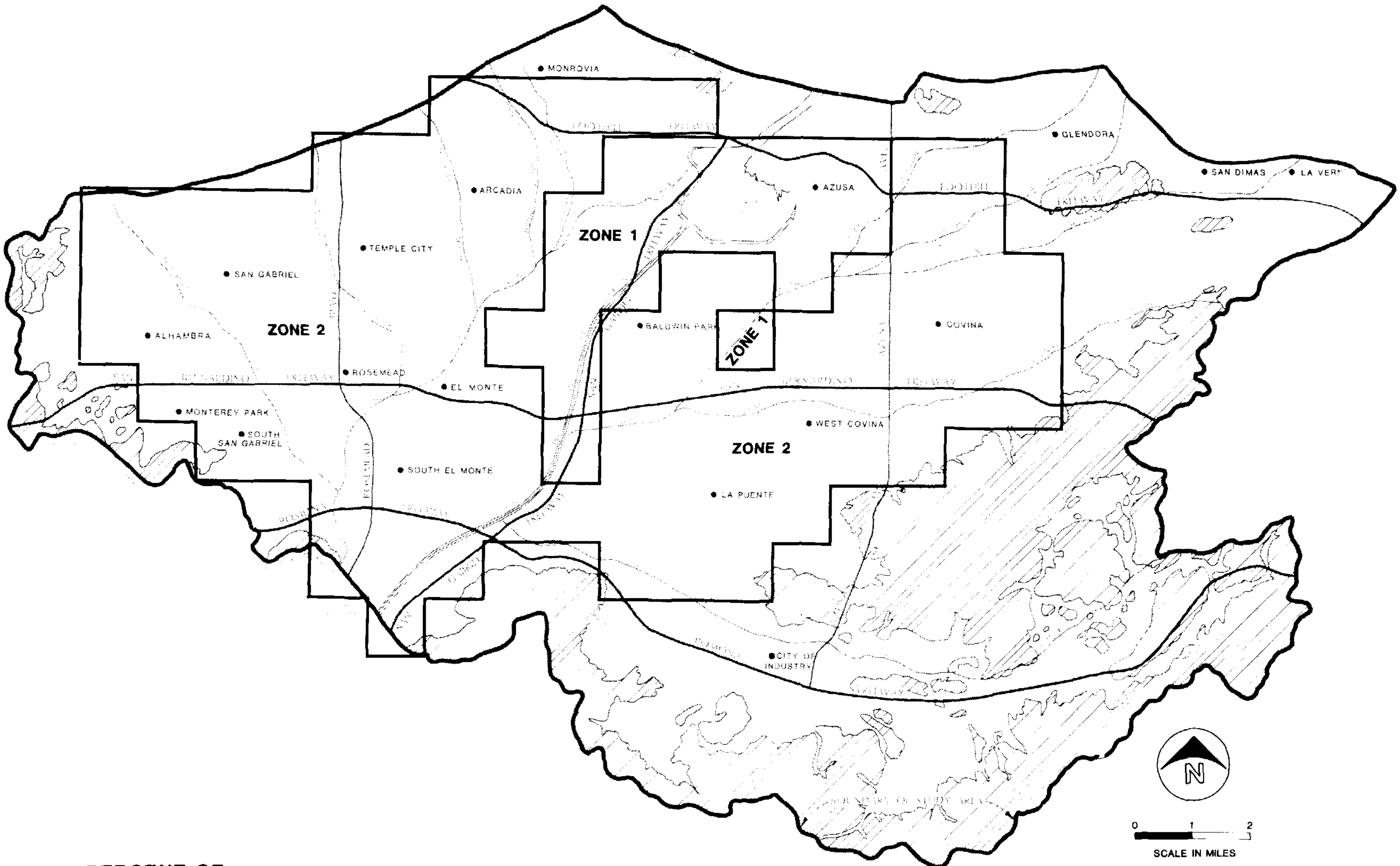
$\Delta \ell$ = distance between the model cell and the boundary source sink

h_b = head of the boundary source or sink

h_i = head in the model cell

This method allows the flow rate into or out of the model to vary with changing water table elevations within the model area and at the boundary. Boundary heads were taken from LACFCD (1977-1982) water table maps. Hydraulic conductivity values were based on the analysis of hydrologic properties and the groundwater budget calculations presented previously.

The bulk amounts of recharge from precipitation estimated in the groundwater budget analysis were distributed non-uniformly across the basin. This distribution is based on estimates of soil infiltration rates (CDWR, 1966) and land cover characteristics based on aerial photography (U.S. EPA, 1976). The vast majority of recharge from precipitation is estimated to occur in the north central portion of the basin, near the San Gabriel River. Here the high soil infiltration rates and the undeveloped open land near the river and at the Santa Fe Detention Basin are ideally suited for percolation of precipitation. Figure A-28 shows the distribution of these recharge zones. In addition to the recharge from precipitation, recharge from riverbed leakage and artificial recharge at spreading basins were applied directly to the appropriate cells in the upper layer. The recharge from precipitation was based on the amounts estimated in Section A.4.1 for each year of the simulation period.



LEGEND

ZONE	PERCENT OF MAXIMUM RECHARGE RATE
1	100
2	0

NONWATER-BEARING ROCK

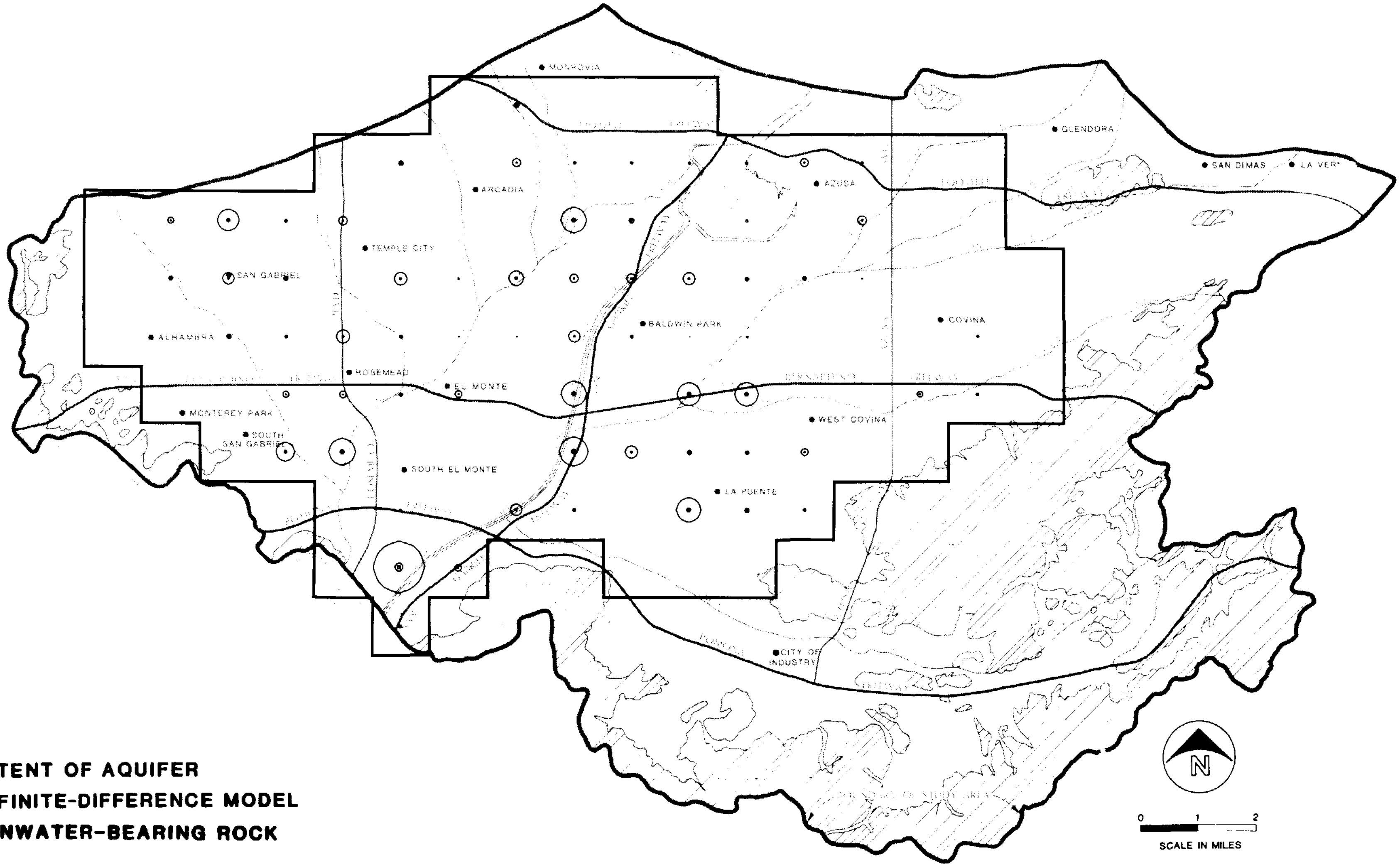
FIGURE A-28
ORIGINAL ZONATION OF
RECHARGE FROM PRECIPITATION
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

The records of groundwater withdrawals from wells in the San Gabriel Basin (MSGB Watermaster, 1977 through 1984) and well locations digitized from maps of the basin (CH2M HILL, 1984 and Stetson Engineers, 1982) were used to develop the pumping data set. The quarterly extractions from all the wells in each model cell were summed. This total for each cell was then split between the upper two layers, because most of the municipal water supply wells in the basin are deeper than the 400 ft thick upper layer. Figure A-29 shows the distribution of groundwater extraction in the basin.

The values of hydraulic conductivity determined in Section A.3.2 (Figure A-9) were used to define zones of hydraulic conductivity. Based on the two-dimensional model analysis, the anisotropy was initially assumed to be characterized by a 2:1 ratio of horizontal to vertical hydraulic conductivity. An analysis of about 650 well logs and results reported by the CDWR (1966) suggested that horizontal hydraulic conductivity does not vary significantly with depth. Therefore, the same horizontal hydraulic conductivity distribution was also applied to the active cells in layers 2, 3, and 4.

The distribution of specific yield determined by CDWR (1966) was used for the initial specific yield data set for the upper layer. Figure A-10 shows this distribution. In the three lower layers, where no dewatering occurs, these values of specific yield were reduced by a factor of 10^{-3}, in order to obtain storativity values. The resulting estimates of storativity are similar to those suggested by Lohman (1979).

Groundwater discharge to rivers occurs in the Rio Hondo and the San Gabriel River near Whittier Narrows. This feature was simulated using the MODFLOW river package, where the



LEGEND

— EXTENT OF AQUIFER IN FINITE-DIFFERENCE MODEL

NONWATER-BEARING ROCK

AVERAGE GROUNDWATER PUMPING IN FINITE DIFFERENCE CELL

10,000 AC-FT/YR

5,000 AC-FT/YR

AVERAGE TOTAL PUMPING IN MODEL AREA=173,600 AC-FT/YR

FIGURE A-29
RELATIVE DISTRIBUTION OF GROUNDWATER PUMPING DURING THE SIMULATION PERIOD
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

discharge through a reach of a riverbed is approximated by Darcy's law as:

$$Q_r = \frac{KLW}{M} (h_r - h_a) \qquad \text{(A-22)}$$

where, Q_r = the leakage through the reach of the riverbed

K = the hydraulic conductivity of the riverbed

L = the length of the reach

W = the width of the river

M = the thickness of the riverbed

h_r = the head on the river side of the riverbed

h_a = the head on the aquifer side of the riverbed

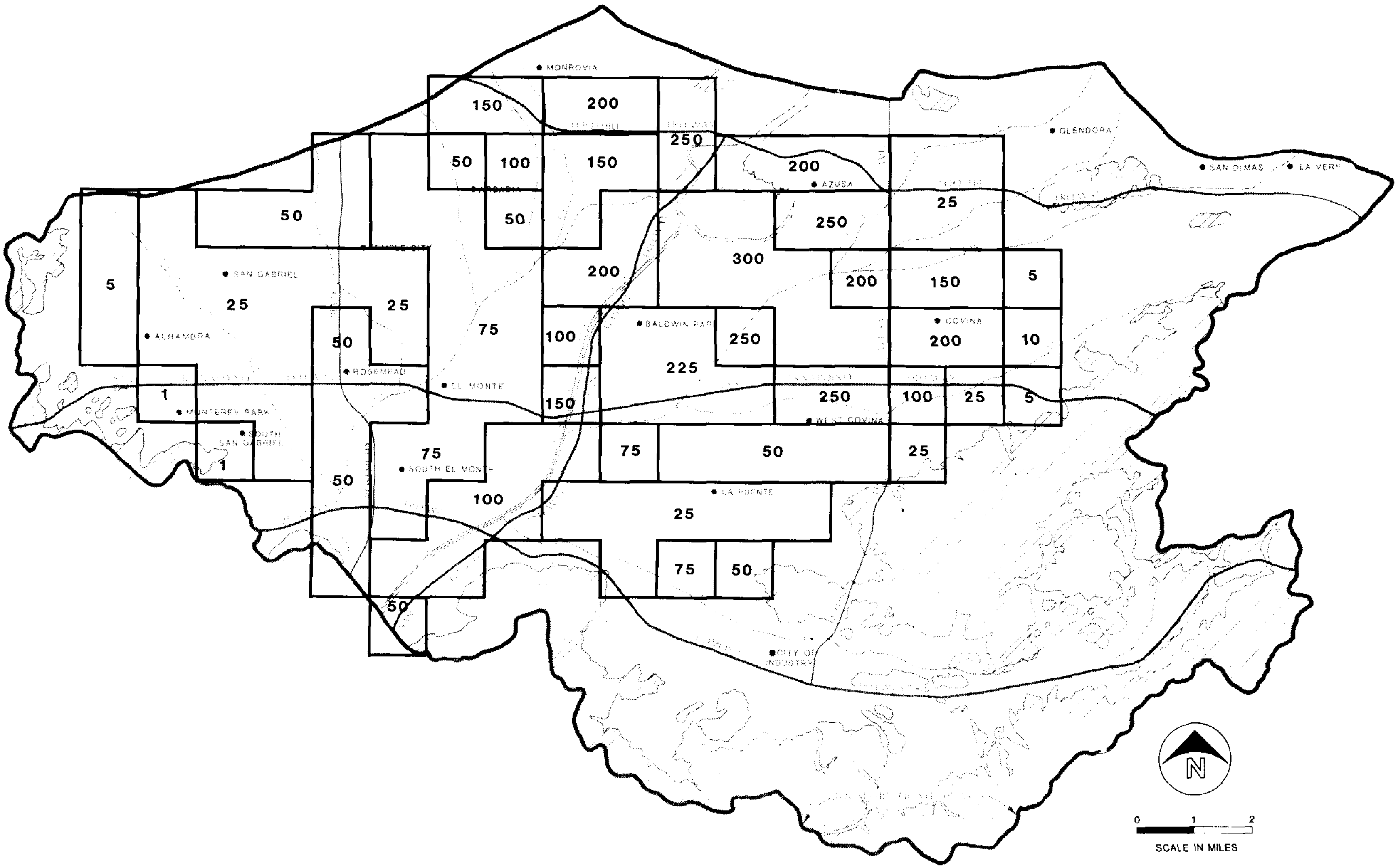
The hydraulic conductivity of the riverbeds was estimated to be 10 ft/d. The riverbeds were estimated to be 10 feet thick. The length, width, river state stage and elevation of the river bottom were estimated from USGS topographic maps.

A.5.3.4 Numerical Model Calibration

The calibration process involves finding a specific combination of values of input parameters that will result in the best match between the simulated model results and observations of the "real-world" groundwater system. This calibration process is in general non-unique; more than one combination of parameters may lead to very similar model results. Consequently, it is important to keep adjusted input parameters within the bounds of reasonable certainty as defined by the analysis of the available hydrogeologic data.

The input parameters to be adjusted include hydraulic conductivity, specific yield and the distribution and rates of recharge. The observations of the "real-world" groundwater system with which the simulated results will be compared include hydrographs at selected "calibration" wells, the annual fall water table maps, the calculated quantities of subsurface flow across the model boundaries, and the estimates of the rates of groundwater discharge to rivers.

The refinement of model parameters to improve the match between simulated and observed conditions did not involve many significant changes to the original estimates. The principal alteration involved enlarging the high conductivity zone (200-300 ft/d) to include more of the eastern portion of the basin. This change resulted in better matches between the observed and simulated needs in this portion of the basin. In addition, the amount and quantity of recharge from precipitation and applied water was evaluated and modified in this calibration process. As discussed in Section A.4.2, recharge from applied water is estimated to be between 0 and 10 percent of the groundwater pumped. Initially, simulations were performed assuming that the amount of recharge from applied water was negligible. However, to obtain a good match between observed and simulated water levels, it was necessary to increase the precipitation recharge. This increase in precipitation recharge is mathematically similar to including recharge from applied water. In fact, subsequent simulations, in which recharge from applied water, as estimated in Section A.4.2, was included, replacing the increased precipitation recharge, produced results that were quite similar. The results presented in the following sections are those of the increased precipitation simulations. The effects of the uncertainty in the amount of recharge from these sources is discussed in Section A.5.4. The refined estimates of hydraulic conductivity zones, specific yield, and recharge zones are shown in Figures A-30, A-31 and A-32, respectively.

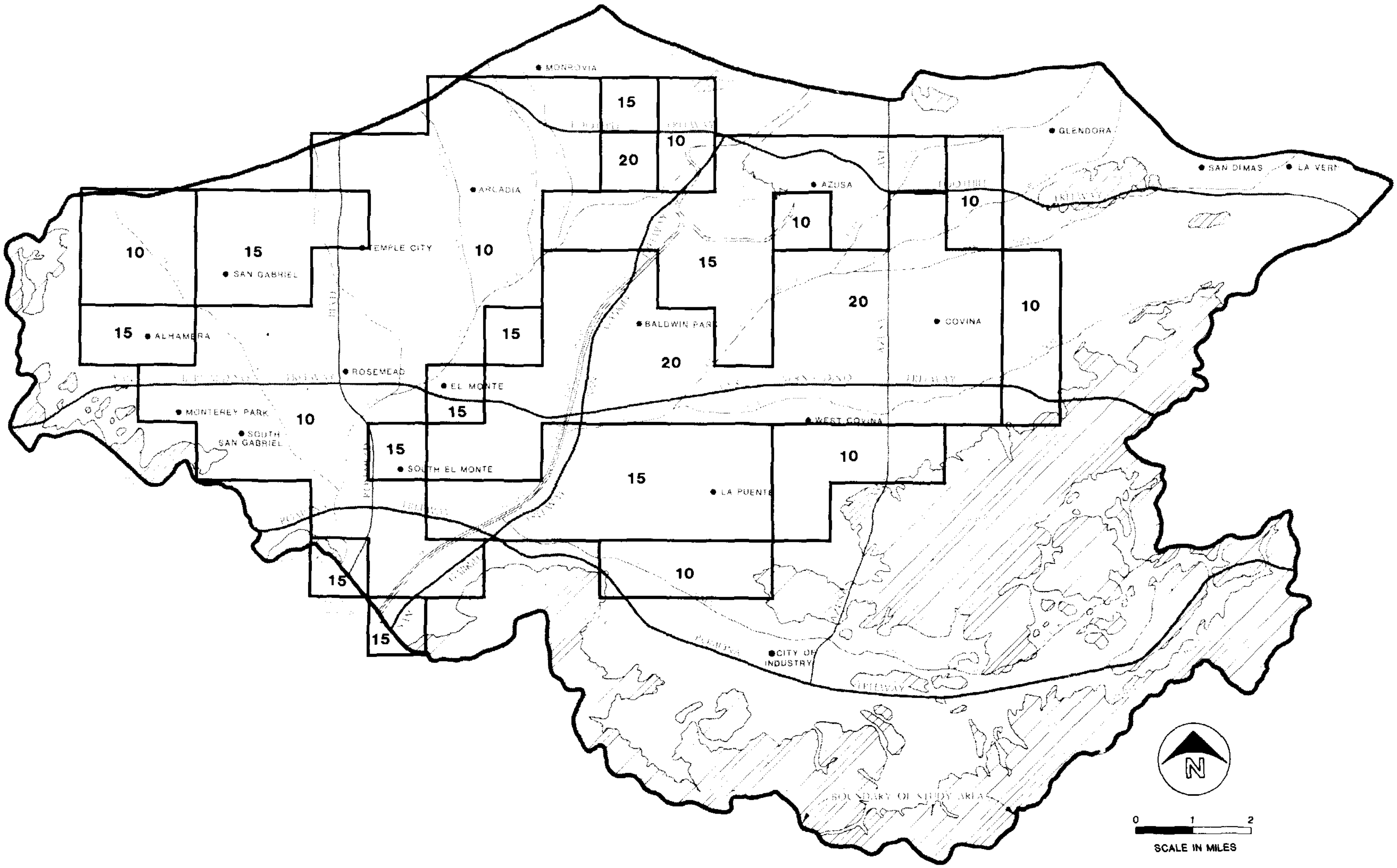


LEGEND

[75] HYDRAULIC CONDUCTIVITY ZONE, FT/D

NONWATER-BEARING ROCK

FIGURE A-30
REFINED HYDRAULIC CONDUCTIVITY ZONATION
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

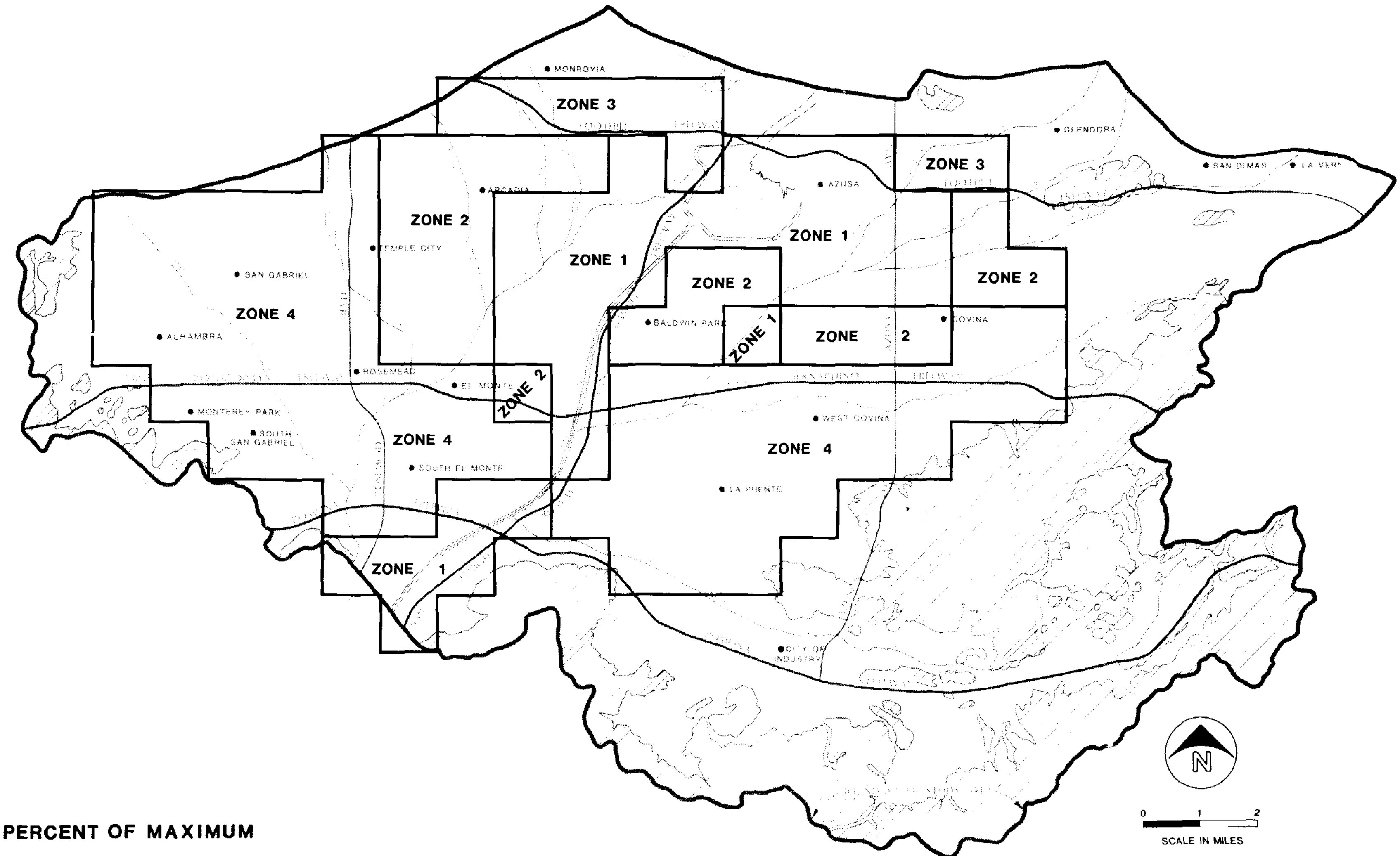


LEGEND

15 SPECIFIC YIELD ZONE, PERCENT

NONWATER-BEARING ROCK

FIGURE A-31
REFINED ESTIMATES OF SPECIFIC YIELD
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



LEGEND

ZONE	PERCENT OF MAXIMUM RECHARGE RATE
1	100
2	80
3	50
4	0

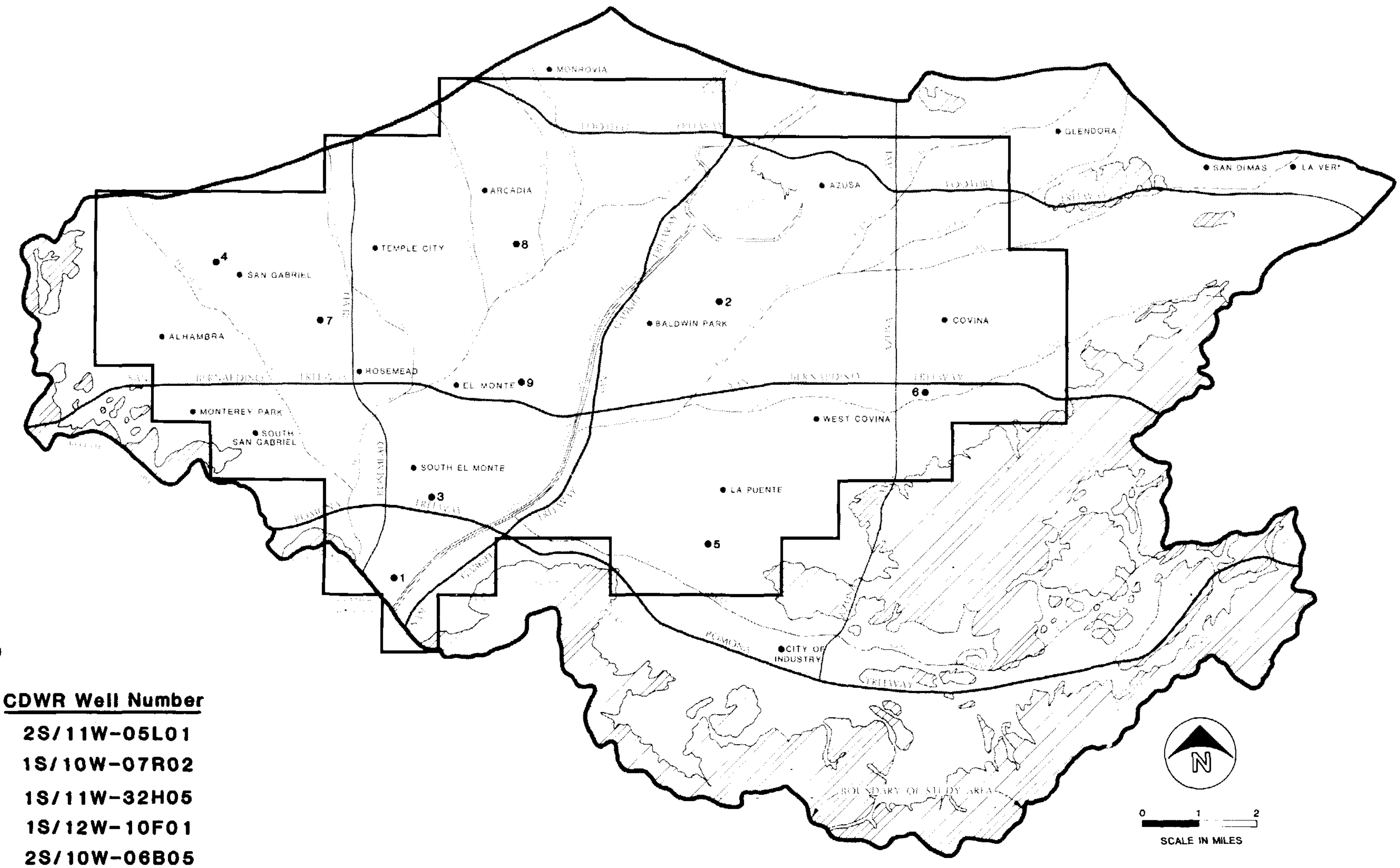
NONWATER-BEARING ROCK

FIGURE A-32
REFINED ZONATION
OF RECHARGE FROM PRECIPITATION
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

Based on a review of water level data obtained by the LACFCD, nine "key" calibration wells throughout the basin were selected. Figure A-33 shows the locations of these wells. Figures A-34a, b, and c compare the water levels measured at these wells with the simulated water levels of these locations. In general, the comparison is very favorable. The trend of water level fluctuations in the basin is simulated accurately at all of the sites. Water levels generally agree to within about 10 feet which is a small discrepancy considering that observed water levels in the basin varied by as much as 85 feet during the simulation period. The standard error or root mean squared error (RMSE) at these points ranged from about 5 feet at wells No. 3, 5, 6, and 9 to 13 feet at well No. 7, and averaged 8 feet.

Another comparison of the simulated and observed conditions is made in Figures A-35 and A-36, which compare the simulated results for the fall of 1979 and 1982 with the LACFCD water table maps. In general, the agreement is quite good. In fact, for the first 5 years of the simulation period, the average RMSE between the simulated and observed water table map is approximately 11 feet. This is an error that is small compared with the range of water levels in the basin, and is generally less than the contour intervals of the LACFCD maps.

The rates of flow across the subsurface boundaries of the model area are compared with the rates calculated in the groundwater budget section in Table A-14. This table also compares the quantities of estimated and simulated groundwater discharge to rivers for each water year of the simulation. The comparison is in general favorable. The differences are within the level of uncertainty in the variables used to calculate the estimates presented in the groundwater budget section.

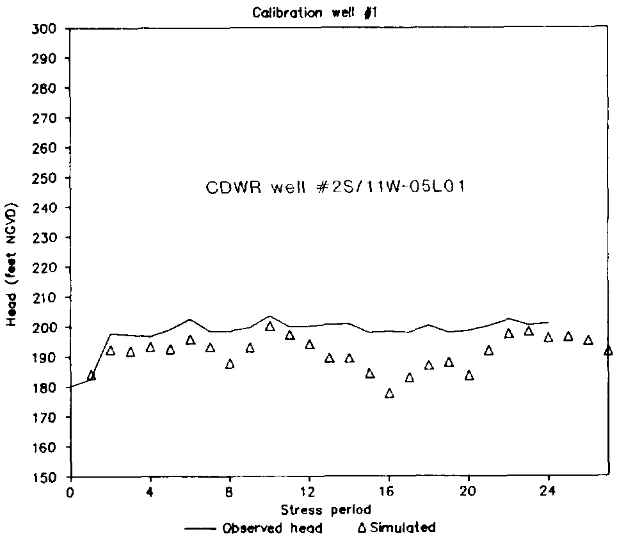


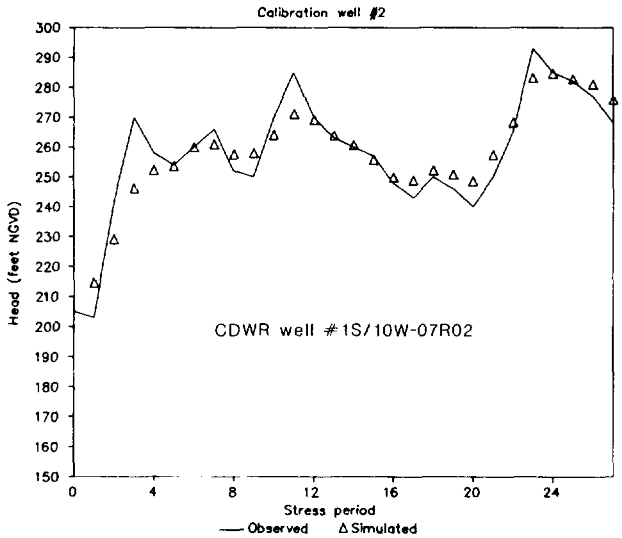
LEGEND

Well		CDWR Well Number
1	-	2S/11W-05L01
2	-	1S/10W-07R02
3	-	1S/11W-32H05
4	-	1S/12W-10F01
5	-	2S/10W-06B05
6	-	1S/10W-23F01
7	-	1S/12W-13H01
8	-	1S/11W-03P02
9	-	1S/11W-22F02

NONWATER-BEARING ROCK

FIGURE A-33
LOCATION OF CALIBRATION WELLS
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM





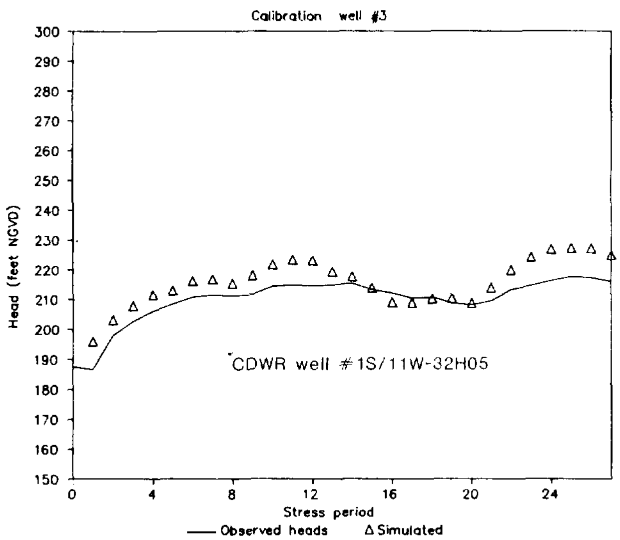
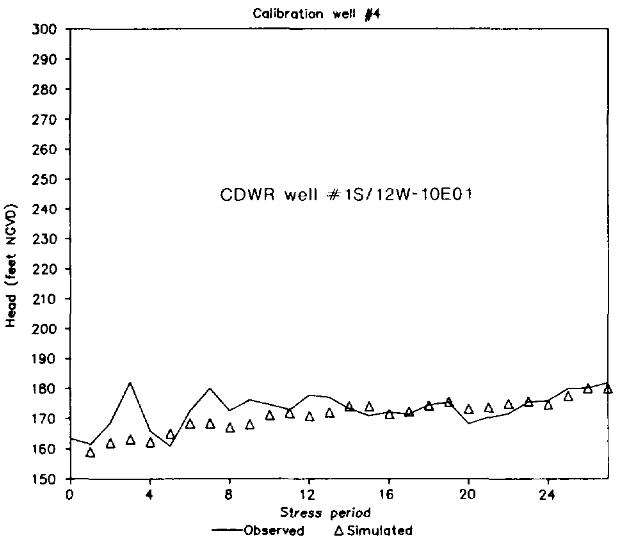
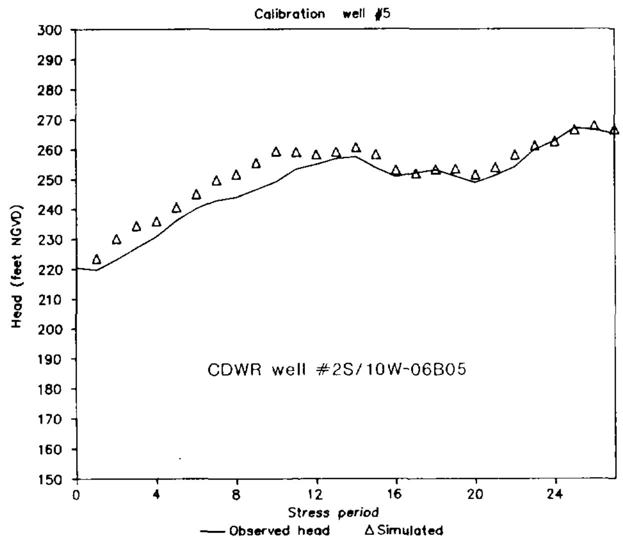


FIGURE A-34 (a)
OBSERVED AND SIMULATED HYDROGRAPHS AT CALIBRATION WELLS 1, 2, and 3.
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM





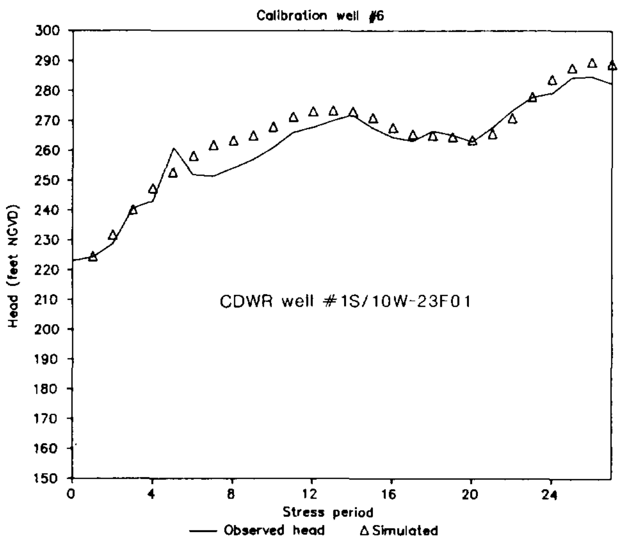
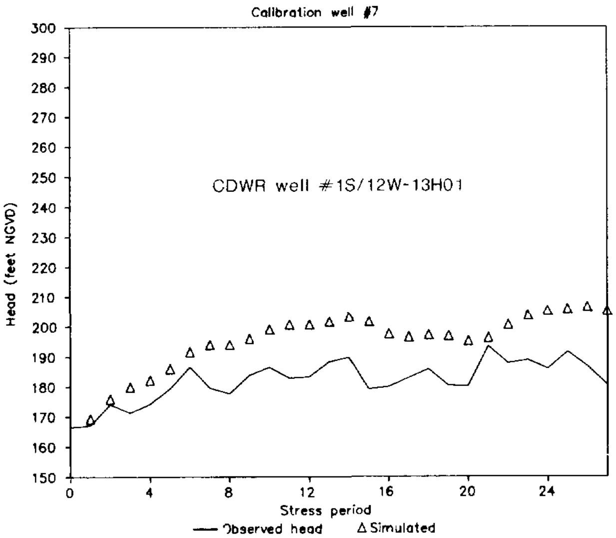
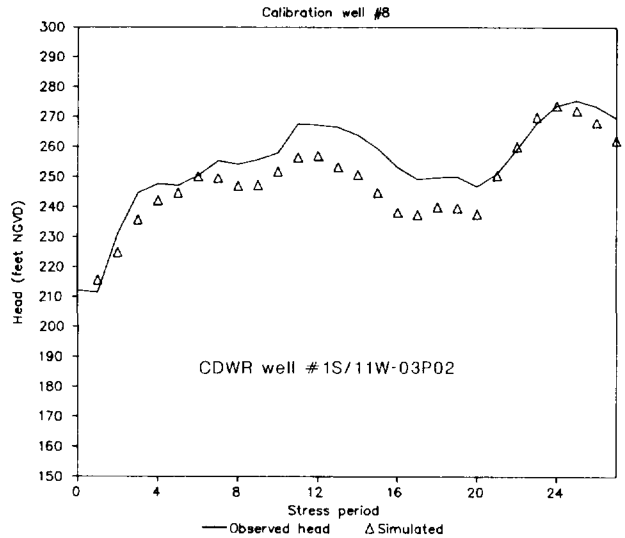


FIGURE A-34(b)
OBSERVED AND SIMULATED HYDROGRAPHS AT CALIBRATION WELLS 4, 5, and 6.
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM





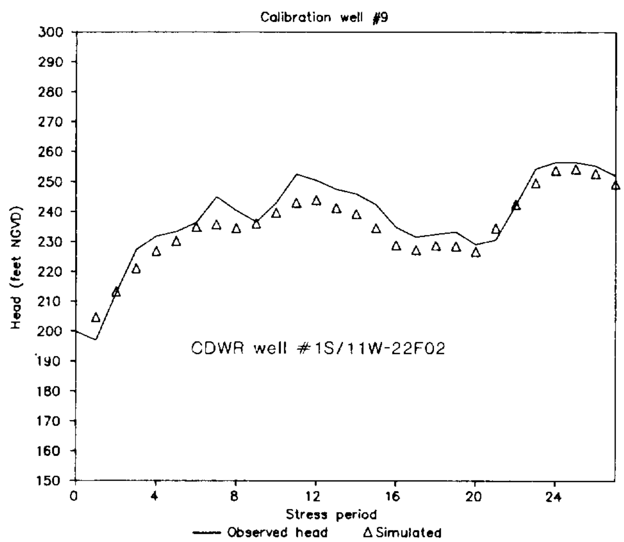
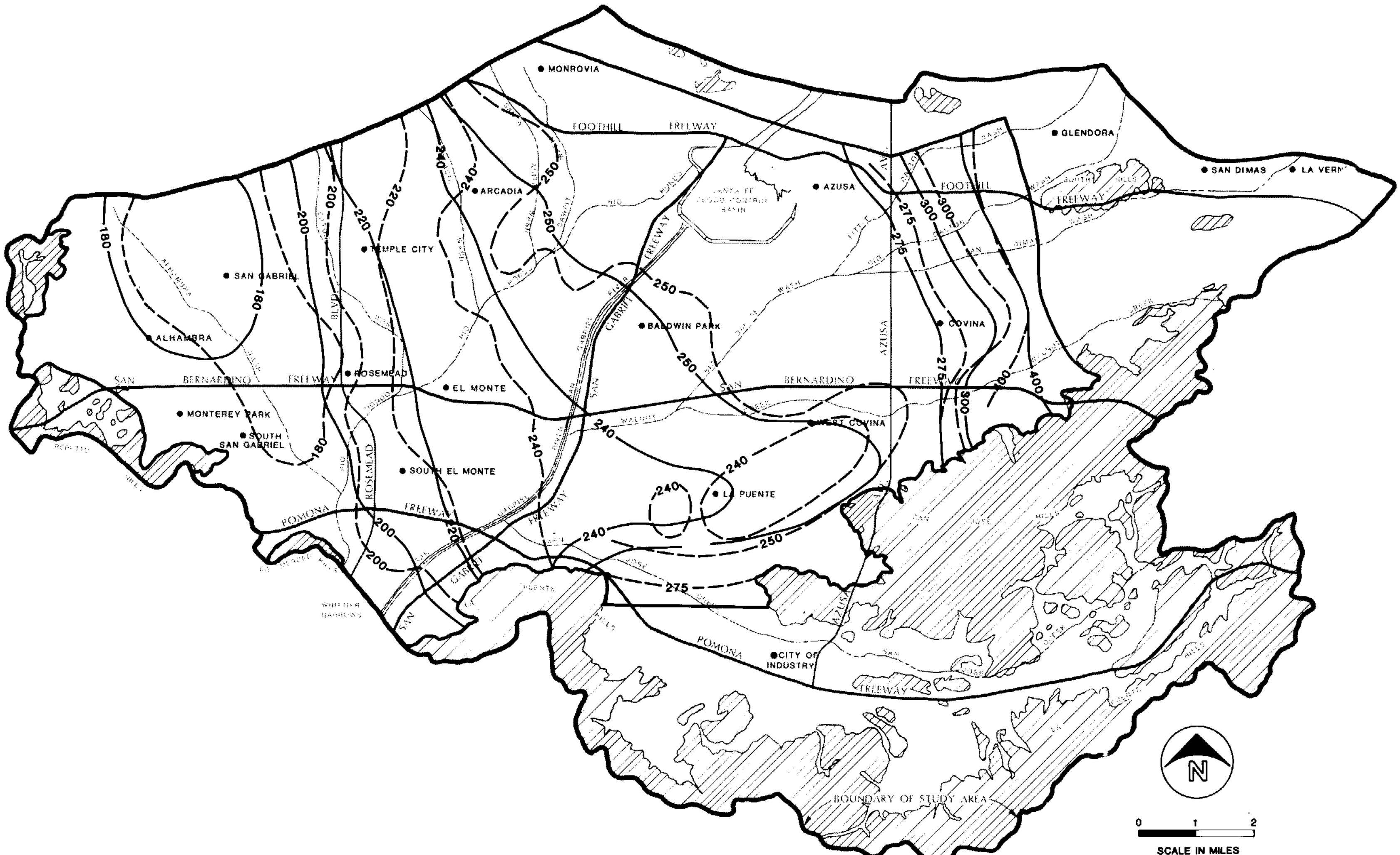


FIGURE A-34(c)
OBSERVED AND SIMULATED HYDROGRAPHS AT CALIBRATION WELLS 7, 8, and 9.
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



LEGEND

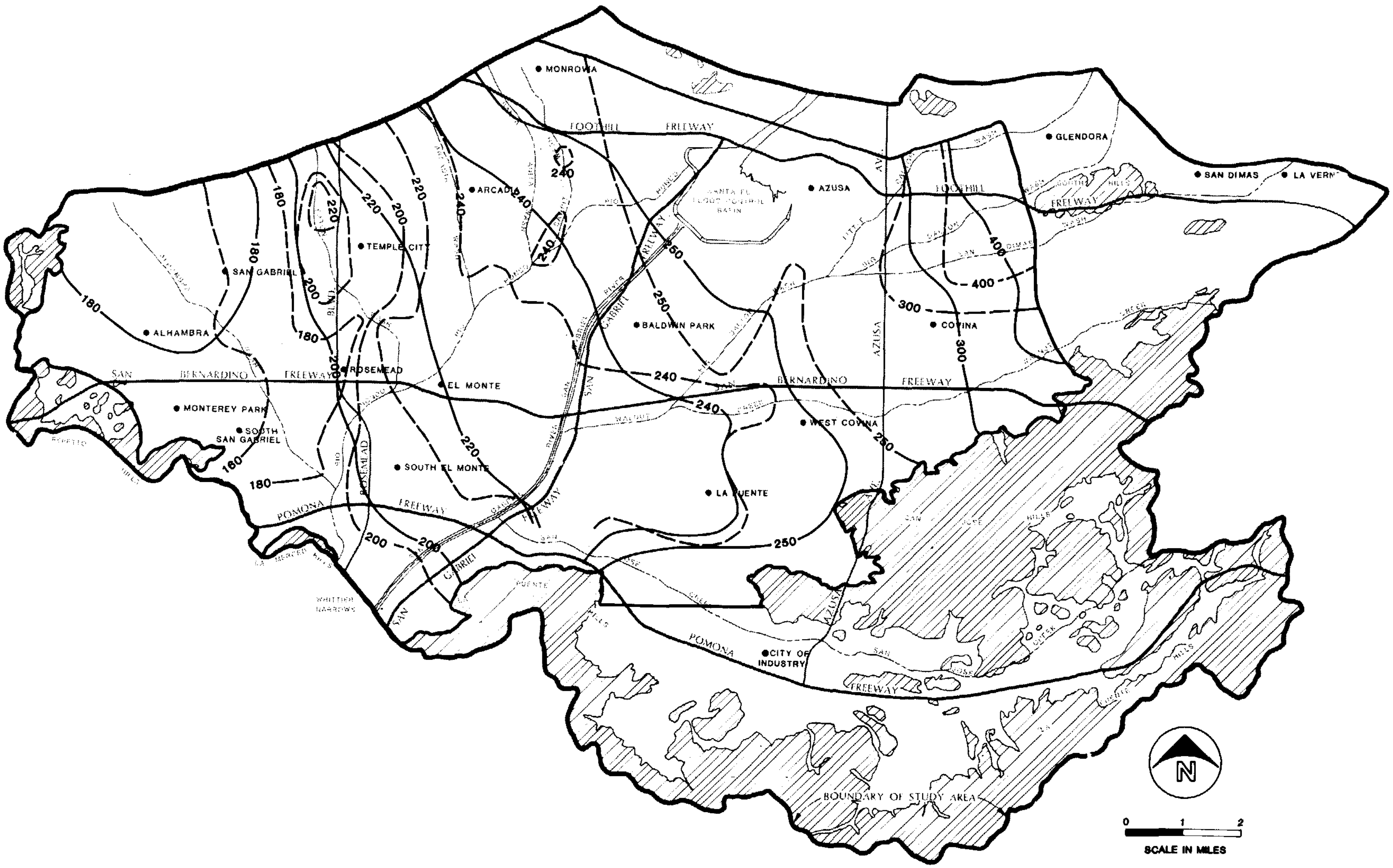
—— 250 —— SIMULATED WATER LEVELS

— — 250 — — OBSERVED WATER LEVELS (LACFCD, 1979)

MODEL AREA

NONWATER-BEARING ROCK

FIGURE A-35
COMPARISON OF OBSERVED AND SIMULATED WATER LEVELS, FALL 1979
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



LEGEND

— 250 — SIMULATED WATER LEVELS

– – 250 – – OBSERVED WATER LEVELS (LACFCD, FALL 1982)

MODEL AREA

NONWATER-BEARING ROCK

FIGURE A-36
COMPARISON OF OBSERVED AND SIMULATED WATER LEVELS, FALL 1982
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

Table A-14
COMPARISON OF CALCULATED GROUNDWATER BUDGET FLOW RATES WITH SIMULATED FLOW RATES
(acre-feet per year)

Year	Raymond Fault		Duarte Fault System		Glendora, Way Hill, and San Dimas Basins		Puente Basin		Whittier Narrows		Groundwater Discharge to Rivers	
	Calculated	Simulated	Calculated	Simulated	Calculated	Simulated	Calculated	Simulated	Calculated	Simulated	Calculated	Simulated
1977-1978	7,200	4,500	19,000	17,400	29,300	20,100	9,700	10,800	-27,100	-32,000	-20,000	-4,000
1978-1979	7,100	4,300	19,000	17,500	25,100	20,400	12,400	10,100	-23,900	-19,700	-14,000	-6,600
1979-1980	7,000	4,400	18,000	16,000	25,100	21,600	11,200	9,600	-23,800	-24,500	-19,000	-14,800
1980-1981	7,000	4,200	22,000	16,000	39,800	23,300	8,900	7,500	-32,000	-31,600	-7,000	-7,800
1981-1982	7,700	4,400	21,000	17,400	9,600	27,800	12,400	9,800	-28,900	-27,500	-12,000	-7,400
1982-1983	7,200	4,400	19,800	16,900	25,800	29,200	10,900	10,700	-29,300	-24,500	-22,000	-15,000
1983 thru June 1984	5,400	3,200	14,800	12,500	19,400	21,500	8,200	7,000	-26,800	-24,000	-6,000	-9,800
Annual Average	7,200	4,200	19,800	16,400	25,800	23,500	10,900	9,400	-27,400	-26,300	-14,500	-9,700

LASG2/027

These comparisons of the observed water levels and calculated flow rates with the results of the three-dimensional numerical simulations indicate that the model reproduces the regional behavior of the groundwater flow system, in terms of water levels and flow directions, in the San Gabriel Basin. However, on a local scale, discrepancies between the "real-world" and simulated results may exist. Certainly, the possibility exists that the match between the simulated and observed can be improved. Therefore, although the three-dimensional simulations appear to offer an accurate regional model of the basin, suitable for the applications described in Section A.5.5, the status of the "calibrated" model must be considered preliminary and subject to further refinements in the hydrogeologic data base.

A.5.4 SENSITIVITY ANALYSIS

In order to address the adequacy of the available data and the potential for improving the performance of the model by further refining the estimates of model parameters, a sensitivity analysis was performed. The sensitivity analysis evaluated the following model parameters:

- Hydraulic conductivity
- Specific yield
- Recharge from precipitation
- Artificial recharge
- Boundary conditions
- Groundwater pumping

The analysis consisted of varying a particular parameter, re-running the model for the first five-years of the simulation period, and observing the effect of the parameter variation on both the simulated water levels and the calculated groundwater velocity.

A.5.4.1 Sensitivity of Simulated Water Levels

Uncertainity about the appropriate value of the ratio of horizontal to vertical hydraulic conductivity was investigated by making simulations with a ratio of 20:1 and a ratio of 1:1. The base case (calibrated value) was 2:1. The effects of anisotropy in the horizontal plane were evaluated by considering ratios of conductivity in the north-south direction (orientation of major stream channels) to conductivity in the east-west direction to be 2:1 and 10:1. The base case was 1:1. The magnitude of the basin-wide estimates of hydraulic conductivity were studied by simulations in which the conductivity was everywhere doubled and halved. Finally, to evaluate the effects of decreasing conductivity with depth, the conductivity of the second layer was reduced by 50 percent, the conductivity of the third layer was reduced by 75 percent, and the conductivity of the fourth layer was reduced by 87.5 percent. The effects of uncertainty in the boundary conditions are expected to be predominantly associated with uncertainty in the value of hydraulic conductivity. Consequently, these effects were evaluated by simulations where the boundary conductance (Equation A-21, $KA/\Delta \ell$) was doubled and halved. Similarly, the values of storativity, recharge from precipitation, recharge at spreading grounds, and pumping were alternately increased and decreased by 20 percent. The results of these simulations were compared with the calibrated results.

In order to systematically evaluate the relative sensitivities of the various parameters, a sensitivity measure can be defined as:

$$S_p = \sum_{n=1}^{N} |\Delta h|_n \; / \; [(\Delta P/P) \times 100\%] \qquad \text{(A-23)}$$

where, S_p = normalized sensitivity measure, representing the average change in water level for a percent change in the parameter

N = number of nodes

Δh = difference in heads at the n-th node

ΔP = change in parameter value

P = initial parameter value

The results of these calculations are summarized in Table A-15. The most sensitive parameters are groundwater pumping and recharge at spreading basins. The simulated water levels are least sensitive to horizontal and vertical anisotropy. Fortunately, the modeling results are most sensitive to the parameters for which some of the best estimates are available; the spatial and temporal distributions of pumping and recharge at spreading basins are fairly well defined. Therefore, error in the simulated heads resulting from uncertainty in these terms is expected to be small. To continue this analysis more rigorously, we may define a measure of the effects of uncertainty in a given parameter u_p as:

$$u_p = S_p \times \delta_p \qquad \text{(A-24)}$$

where, u_p = level of uncertainty is simulated results

S_p = the sensitivity parameter defined in (A-23)

δ_p = an estimate of the possible error in the parameter expressed as a percent

The estimate of the potential error in an estimate of a parameter, δ_p, defines a confidence interval which contains the actual value of the parameter, P, at some confidence level. This confidence interval may be expressed as:

$$P^* (1 + \delta_p/100)^{-1} \leq P \leq P^* (1 + \delta_p/100) \qquad \text{(A-25)}$$

where P* is the estimated value of the parameter. We will define the error factor in terms of a non-quantitative confidence level: reasonable certainty. The estimates of the possible error, δ_p, of the model parameters are based on hydrogeologic judgement with consideration given to the source and accuracy of the basic data sets. These values and the resulting measure of uncertainty, in terms of the system response, are also summarized in Table A-15. This table indicates that the uncertainty in estimates of specific yield and boundary conductance cause the greatest average change in water levels within the basin. Uncertainty in estimates of recharge from precipitation, recharge at spreading basins, and hydraulic conductivity, cause an average uncertainty in water levels greater than 10 feet. Of course, it is important to note the following limitations of this analysis. The estimates of the possible error of the model parameters, although based on engineering judgment, are nonetheless somewhat arbitrary. In addition, it must be remembered that the model parameters are representative of regionally averaged hydrogeologic properties; as discussed previously, smaller scale deviations from these large scale averages may be much larger than the values of δ_p listed in Table A-15.

A.5.4.2 Sensitivity of Calculated Groundwater Velocity

As discussed previously, one of the primary applications of the modeling results is the calculation of groundwater velocities. This application is important because of the lack of data on actual groundwater velocities: it is very difficult to actually measure groundwater velocity in the field. It

Table A-15
EFFECTS OF UNCERTAINTY IN ESTIMATES OF
MODEL PARAMETERS ON SIMULATED WATER LEVELS

Model Parameter	Sensitivity Measure (Average Change in Water Level per Percent Change in Parameter, S_p)	Possible Error in Estimate, δ_p (Percent)	Uncertainty in Average Water Levels, U_p (ft)
Specific yield	0.19	100	19
Boundary conductance	0.14	100	14
Recharge from precipitation	0.23	50	12
Vertical distribution of hydraulic conductivity	0.12	100	12
Horizontal hydraulic conductivity	0.11	100	11
Recharge at spreading basins	0.40	25	10
Groundwater pumping	0.60	10	6
Horizontal anisotropy	0.02	200	4
Vertical anisotropy	0.002	900	2

is generally estimated as the product of the hydraulic conductivity and the hydraulic gradient (slope of the water table) divided by the effective porosity of the aquifer. One advantage of using the results of a calibrated groundwater flow model to accomplish this task is that the model integrates all of the available information, including estimates of hydraulic conductivity, specific yield, recharge, and groundwater pumping, in solving for the water levels.

This assures that a consistent set of parameters is used. However, the resulting calculated groundwater velocity, like the parameters used in the calculations, is an average over a sizeable volume of the aquifer. If there are significant variations in hydraulic conductivity within this region, groundwater velocities will vary accordingly: some of the water will move faster than the average and some will move more slowly. This variation of the velocity within an aquifer will cause contaminants moving with the groundwater to spread out and contributes to the phenomenon known as dispersion. The transport of contaminants in the subsurface is affected to varying degrees by the average groundwater velocity, and also dispersion, retardation and degradation. The consideration of the latter three processes is beyond the scope of this study. However, the consideration of the average groundwater velocity is considered to be useful for the planning of RI/FS activities.

A sensitivity analysis was performed to evaluate the effects of uncertainty in model parameters on the average groundwater velocities calculated from the modeling results. The average horizontal groundwater velocity in an area near the center of the basin, where contaminated groundwater is known to occur, serves as the basis for comparison. For the base case, i.e., the calibrated results, the groundwater velocity is approximately 200 ft/yr in a south western direction. The velocity in this area was calculated for each of the above simulations. The sensitivity measure is taken to be the percent change in velocity per percent change in parameter:

$$S_p = (\Delta V/V) \; / \; (\Delta P/P) \qquad \text{(A-26)}$$

where, ΔV = change in velocity

V = horizontal groundwater velocity.

The sensitivity measures and estimates of the potential error in estimates of model parameters were used to estimate the level of uncertainty associated with calculations of velocity. The level of uncertainty in the calculated velocity is presented in terms of percent and in terms of feet per year at the reference cell. These calculations are summarized in Table A-16.

Table A-16
EFFECTS OF UNCERTAINTY IN ESTIMATES OF
MODEL PARAMETERS ON CALCULATED GROUNDWATER VELOCITY

Model Parameter	Sensitivity Measure (Percent Change in Velocity per Percent Change in Parameter, S_p)	Possible Error in Parameter Estimate, δ_p (Percent)	Uncertainty in Calculated Velocity (Percent)	Uncertainty in Calculated Velocity Ft/Yr at Reference Cell
Specific yield	-1.10	100	110	234
Vertical distribution of hydraulic conductivity	-0.76	100	76	160
Horizontal hydraulic conductivity	0.26	100	26	56
Boundary conductance	0.14	100	14	30
Recharge at spreading basins	0.48	25	12	25
Recharge from precipitation	0.23	50	12	25
Vertical anisotropy	-0.01	900	6	12
Groundwater pumping	-0.18	10	2	4
Horizontal anisotropy	-0.01	200	2	4

A.5.4.3 Discussion of Results

Although the sensitivity of the calculated velocity to the various model parameters is likely to be highly variable spatially within the basin, the results presented in Table A-16 provide a useful measure of the relative importance of the different parameters. The greatest degree of uncertainty in velocities appears to be associated with the specific yield and the vertical distribution of hydraulic conductivity. The simulations indicate that if hydraulic conductivity decreases markedly with depth, a larger portion of the regional flow in the basin travels through the upper layer, thereby increasing groundwater velocities through this layer. Uncertainty associated with horizontal hydraulic conductivity also may be significant. Of intermediate importance to velocity calculations are estimates of boundary conductance and recharge. Potential errors in the estimates of groundwater pumping and anisotropy do not appear to significantly affect calculations of average groundwater velocity in the reference portion of the model area.

Although there is a considerable margin of uncertainty in average groundwater velocities, the improvement obtained by utilizing the modeling and sensitivity analyses has also been considerable. The original analyses of the hydrogeologic properties of the basin led to estimates of hydraulic conductivity that were judged to be accurate to within an order of magnitude. However, the subsequent two- and three-dimensional modeling analysis and sensitivity analyses identified the possible ranges of the model parameters and examined the effects of these uncertainties. This approach has led to a better understanding of the validity and accuracy of the modeling results. Moreover, based on the sensitivity results, areas of further data collection and refinement may be identified and prioritized. The parameters for which additional data aquisition and analysis would be the most beneficial, in terms of reduction of uncertainty in the modeling results are:

- The areal distribution and magnitude of specific yield
- The horizontal and vertical distribution of hydraulic conductivity
- Recharge at spreading basins and from precipitation

A.5.5 APPLICATIONS OF MODEL RESULTS

The results of the modeling described in Section A.5.3 were used to evaluate the seasonal and spatial variations in the groundwater flow field. In addition, the simulated flow field was compared with the groundwater flow field suggested by actual water level maps. Areas that are potential sources of contamination were identified using the results of the analysis of the flow field in conjunction with available water quality data. Finally, the model results were used to make an initial assessment of the future areas of contamination if no remedial action is undertaken and contaminants are allowed to continue to migrate in the subsurface.

A.5.5.1 Evaluation of Groundwater Flow Field

The groundwater flow field in the San Gabriel Basin is the dominant factor controlling the present locations of contaminated groundwater in relation to the sources of the contamination. Similarly, the flow field will determine where contaminants will move in the subsurface. The following subsections describe the analysis of the groundwater flow field based on the model results.

A.5.5.1.1 Objectives and Methodology

The objectives of the analysis of the groundwater flow field based on the modeling results are to:

- Evaluate the magnitude of seasonal and yearly changes in the directions and rates of groundwater flow
- Develop a time-averaged groundwater flow field which can be used to make an initial assessment of potential source areas of contamination and potential migration of contamination
- Assess the accuracy of the groundwater flow field determined by the modeling results vis-a-vis the flow field suggested by a series of actual water table maps

The average groundwater velocity or seepage velocity is defined by (Bear, 1979):

$$\underline{v} = \underline{q}/n = (\underline{\underline{K}}\ \nabla h)/n \qquad \text{(A-27)}$$

where,

$\underline{v}$ = average groundwater velocity

$\underline{q}$ = specific discharge or "Darcian velocity"

n = effective porosity

$\underline{\underline{K}}$ = hydraulic conductivity tensor

∇h = hydraulic head gradient

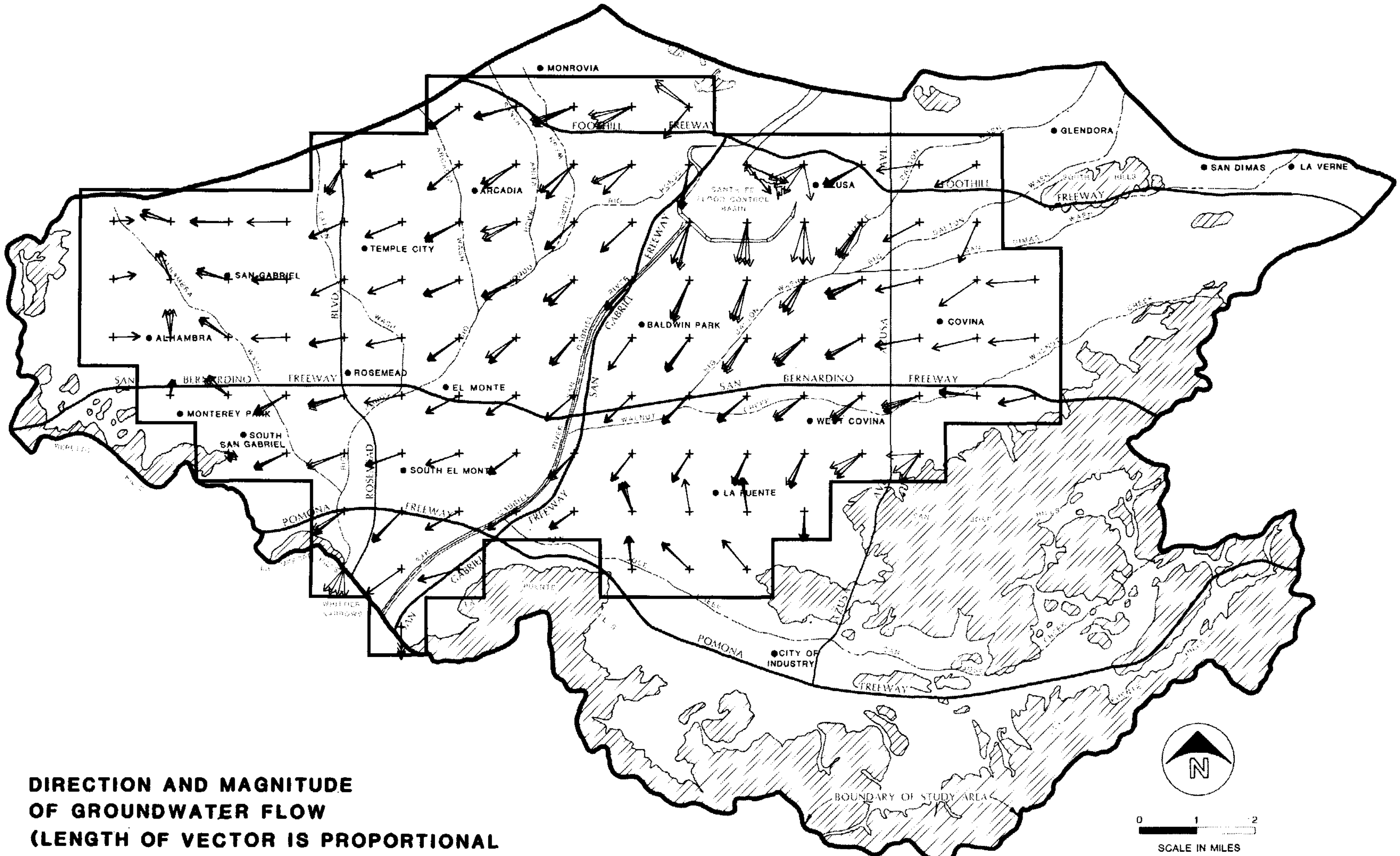
The direction and magnitude of the horizontal components of the groundwater velocity in each cell in the upper layer of the model area were calculated for each of the 27 seasons of the 6-3/4 year model simulation period. The hydraulic conductivity and specific yield (assumed to be approximately equal to effective porosity) values used in the "calibrated" model, and a finite-difference approximation of the hydraulic head gradient, based on the simulated water levels, were used in the solution of Equation A-27.

A.5.5.1.2 Evaluation of Seasonal Variations

The magnitude of the seasonal and yearly fluctuations of water levels in the San Gabriel Basin, as discussed previously, may be considerable. The effects of these water level fluctuations on groundwater flow rates and directions were evaluated. Figure A-37 shows the average flow direction over the simulation period for each season. The seasons, each representing a stress period, are October through December, January through March, April through June, and July through September. As indicated in Figure A-37, the average flow direction is generally fairly similar in each cell. The exceptions to this trend occur near the boundaries of the simulation domain, where, by the nature of the finite-difference approach used, solutions may be somewhat less accurate. In addition to the similar seasonal flow directions, the magnitudes of the velocities at each cell are also generally quite similar in each season, although they may vary by up to about 50 percent.

A.5.5.1.3 Comparison With Actual Water Level Maps

In order to evaluate the potential for using an average groundwater flow field, based on the simulation period of October 1977 through June 1984, to make an initial assessment of contaminant movement in the subsurface, the time averaged flow field based on the simulations was compared with an average flow field based on an analysis of actual water level maps for the period from Fall of 1950 through Fall of 1982 (LACFCD) (the latest year for which water level maps are available). The groundwater velocity at selected



LEGEND

DIRECTION AND MAGNITUDE OF GROUNDWATER FLOW (LENGTH OF VECTOR IS PROPORTIONAL TO NATURAL LOG OF VELOCITY)

20 FT/YR

200 FT/YR

2000 FT/YR

EXTENT OF AQUIFER IN FINITE-DIFFERENCE MODEL

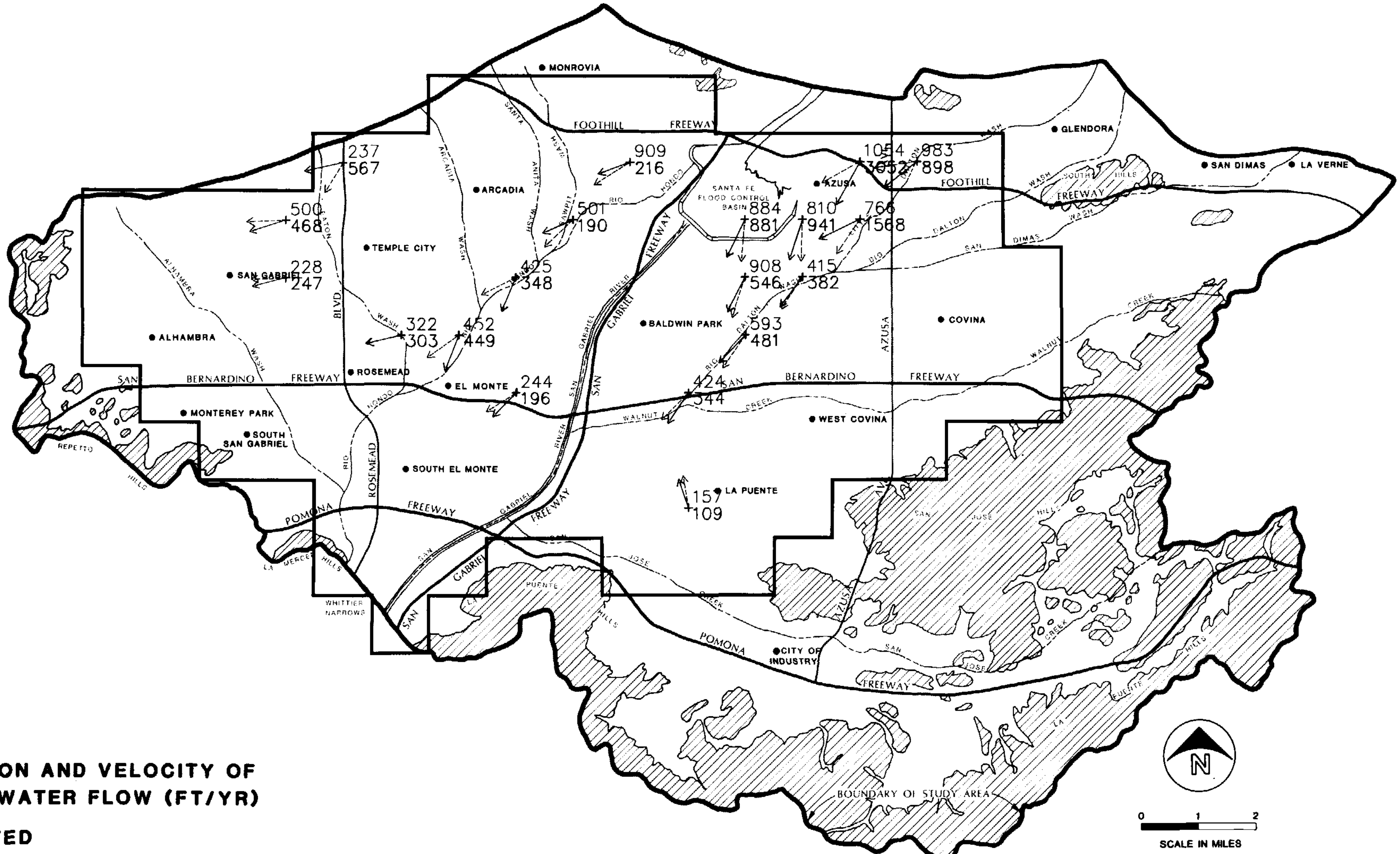
NONWATER-BEARING ROCK

FIGURE A-37
AVERAGE SEASONAL GROUNDWATER FLOW DIRECTIONS
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

points in the basin was calculated using Darcy's law and the same estimates of hydraulic conductivity and effective porosity as in the model flow field calculations. These two average flow fields are shown in Figure A-38. In general, the comparison is quite favorable. At most of the points the magnitudes and directions of the two velocities are quite similar. The exceptions to this trend occur near the boundaries of the simulation domain, where the simulated velocities, calculated by the finite-difference method described above, may be less accurate. In general, however, the velocities agree to within at least plus or minus 50 percent.

A.5.5.1.4 Results

The conclusion that can be drawn from this analysis is that, for the purposes of preliminary identification of areas that may be sources of contamination and preliminary evaluation of potential migration of contaminants, the use of an average flow field may be appropriate. This average flow field was determined by averaging the velocities and directions at each cell for each of the 6-3/4 years in the model simulation period. Figure A-39 shows this average flow field. The directions of flow are consistent with the conceptual model of the basin hydrogeology. Groundwater enters the basin from the neighboring basins on the northwest, north, east, and southeast; and flows either toward major pumping centers or toward Whittier Narrows to the southwest. Regionally, average groundwater velocities appear to range from about less than 100 ft/yr in the western portion of the basin, where hydraulic conductivity is relatively low, to over 1,000 ft/yr in the eastern and north-central portions of the basin, where hydraulic conductivity and hydraulic gradients are relatively high. Throughout most of the south-central portion of the basin, the average velocity ranges from about 100 to 500 feet per year.



LEGEND

DIRECTION AND VELOCITY OF GROUNDWATER FLOW (FT/YR)

SIMULATED

884 - SIMULATED

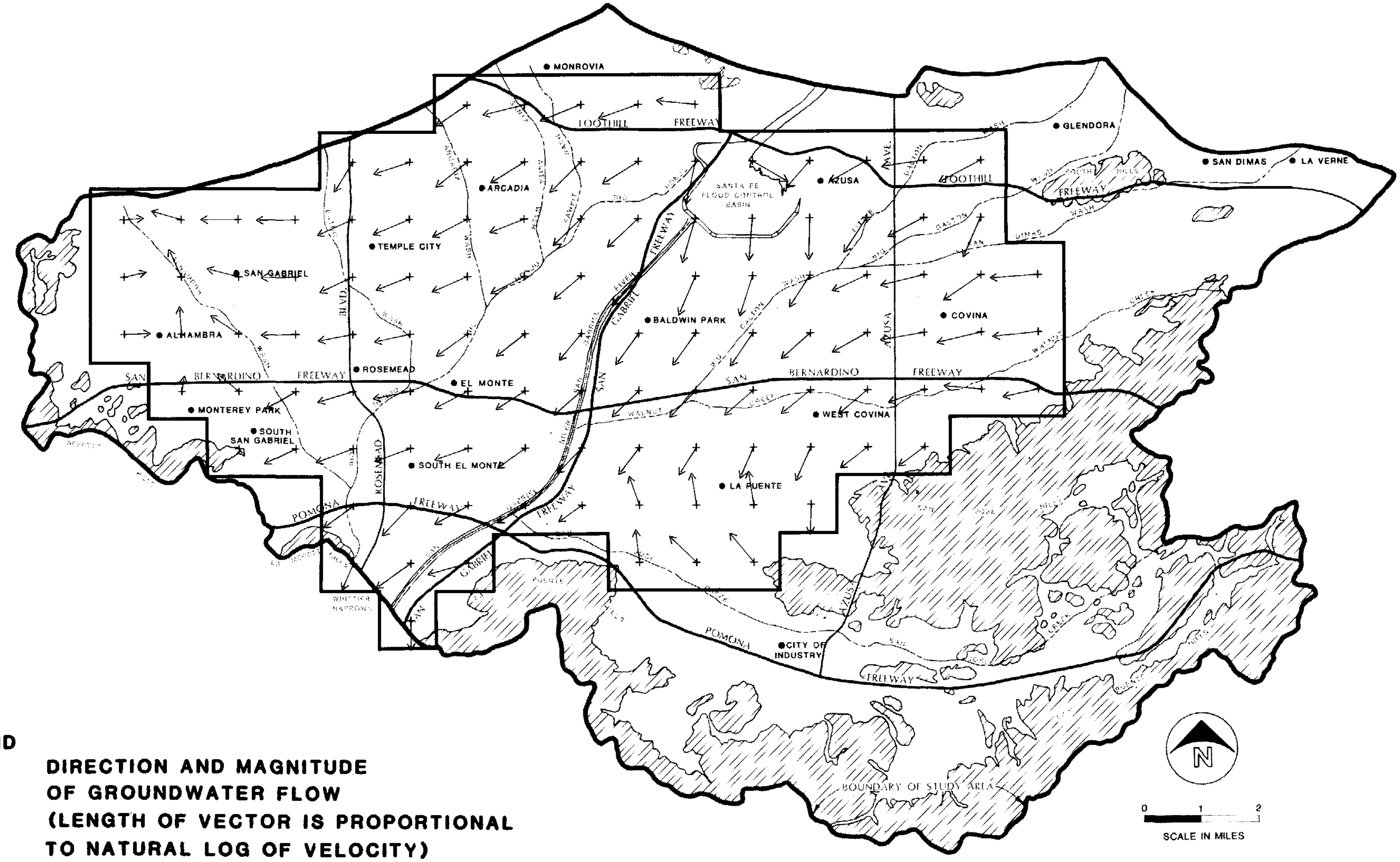
880 - FROM WATER LEVEL MAPS

WATER LEVEL MAP

EXTENT OF AQUIFER IN FINITE-DIFFERENCE MODEL

NONWATER-BEARING ROCK

FIGURE A-38
COMPARISON OF SIMULATED GROUNDWATER VELOCITIES WITH VELOCITIES DETERMINED FROM WATER LEVEL MAPS
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



LEGEND

DIRECTION AND MAGNITUDE OF GROUNDWATER FLOW (LENGTH OF VECTOR IS PROPORTIONAL TO NATURAL LOG OF VELOCITY)

20 FT/YR

200 FT/YR

2000 FT/YR

EXTENT OF AQUIFER IN FINITE-DIFFERENCE MODEL

NONWATER-BEARING ROCK

FIGURE A-39
TIME AVERAGED GROUNDWATER FLOW FIELD
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

Comparison of Figure A-39 with the plumes of groundwater contamination (Plates 1 through 3, Volume I) indicates a strong correlation between the shapes of the plumes and the average flow vectors. This suggests that: 1) the model is accurately simulating regional flow in the basin, and 2) the average flow field is fairly representative of the transport of contaminants in the subsurface that has occurred.

A.5.5.1.5 Discussion of Results

Because these velocities are based on the model simulations, they are susceptible to the same uncertainties discussed in Section A.5.4. In addition to parameter uncertainties, the usefulness of the simulated groundwater velocities is hindered by the scale of the analysis. This scale of analysis uses regionally averaged values of hydraulic conductivity and effective porosity that are representative of the regional scale behavior of the basin. However, on a local scale, these hydraulic properties may vary considerably. For example, the hydraulic conductivity of a lens of coarse gravel may be orders of magnitude greater than the average hydraulic conductivity of a larger section of alluvium which includes the gravel lens; the actual groundwater velocity in that gravel lens may be orders of magnitude greater than the average groundwater velocity of the larger section of alluvium.

Similarly, because of the scale of discretization used in the model analysis, small scale effects, such as a localized cone of depression around a pumping well, may not be apparent in either the modeling results or the basin-wide water level maps prepared by LACFCD. The groundwater velocities shown in Figure A-39 must be evaluated in this light; they are representative of average groundwater velocities, averaged over a sizeable volume, and small scale variations from these averages may be significant.

A.5.5.2 Evaluation of Potential Source Areas

The identification of areas that are potential sources of contamination is important for defining future remedial investigation activities and the evaluation of possible remedial action alternatives. This analysis was undertaken using: the results of the analysis of the flow field (based on model results and on historical water level data for areas outside model boundary), the available water quality data, and a semi-analytical mathematical model of groundwater transport. The methods and results of this analysis are described in the following subsections.

A.5.5.2.1 Methodology

The groundwater transport aspects of the problem of identifying source areas were treated using a semi-analytical mathematical model. This mathematical model has been implemented in a computer code called RESSQ (Javandel et. al., 1984). The model applies the concept of the complex velocity potential, a well-known concept of fluid mechanics. The complex velocity potential is defined by (Javandel et. al, 1984):

$$W = \phi + i\psi \qquad \text{(A-28)}$$

where, W = the complex velocity potential

ϕ = the velocity potential

ψ = the stream function

$i = \sqrt{-1}$

This concept is valid when both the velocity potential and the stream function satisfy Laplace's equation:

$$\nabla^2 \phi = \nabla^2 \psi = 0 \tag{A-29}$$

In other words, this method of analysis is limited to steady state two-dimensional fluid flow through homogeneous isotropic porous media. Under such circumstances, the over-all complex velocity potential of a system consisting of one point sink (pumping well) and a uniform regional groundwater flow regeme leads to the following expressions for the velocity field of the system at any given point with coordinates (x,y) (Javandel et. al, 1984):

$$v_x = -\frac{1}{n}\frac{\partial \phi}{\partial x} = \frac{q}{n}\cos\alpha - \frac{Q}{2\pi b}\,\frac{x - x_j}{(x-x_j)^2 + (y-y_j)^2} \tag{A-30}$$

$$v_y = -\frac{1}{n}\frac{\partial \phi}{\partial y} = \frac{q}{n}\cos\alpha - \frac{Q}{2\pi b}\,\frac{y - y_j}{(x-x_j)^2 + (y-y_j)^2} \tag{A-31}$$

where, v_x, v_y = components of groundwater velocity in the x and y directions, respectively

n = effective porosity of the medium

q = specific discharge or Darcy velocity of the regional flow

α = angle between the positive x axis and the direction of regional flow

b = aquifer thickness, and

Q = rate of discharge from a well located at coordinates (x_j, y_j).

If the contaminant particle's movement is not slowed by absorption onto the rock matrix, the velocity of the contaminant particles is defined by Equations A-30 and A-31.

The path line traveled by a contaminant particle can be divided into increments, dl, which are traversed in time intervals, dt. The projections of dl on the x and y axes are given by dx and dy, respectively, where

$$dx = v_x dt \tag{A-32}$$

$$d_y = v_y dt \tag{A-33}$$

$$dl = (ds^2 + dy^2)^{\frac{1}{2}} = (v_x^2 + v_y^2)^{\frac{1}{2}} dt \tag{A-34}$$

Numerical integration of Equation A-34 yields travel time between any two points of a given streamline. If a contaminant particle is at a point (x_k, y_k) at time t, its position at time t + Δt can be calculated from

$$x_{k+1} = x_k + v_x \Delta t \tag{A-35}$$

$$y_{k+1} = y_k + v_y \Delta t \tag{A-36}$$

The computer code RESSQ was used to perform the above calculations numerically. The code was used to calculate the zone of capture of wells with contaminated groundwater for various time periods. The zone of capture is the region from which groundwater and contaminants would be extracted in a given time period. In the following analysis, effect of retardation, dispersion, and contaminant degradation are neglected for the purpose of this phase of the investigation.

A.5.5.2.2 Analysis

The zone of capture or potential source area was calculated for 39 wells with TCE, PCE, and/or carbon tetrachloride above action limits during 1985 or when last sampled. Although this does not include every well with contaminants above action levels, most potential upgradient source areas are included in this analysis. The zone of capture was computed for periods of 5, 10 and 20 years for most wells (Figure A-40). For the longer time periods, as the zone of capture extends farther from the well, the assumption of a uniform flow field becomes less valid.

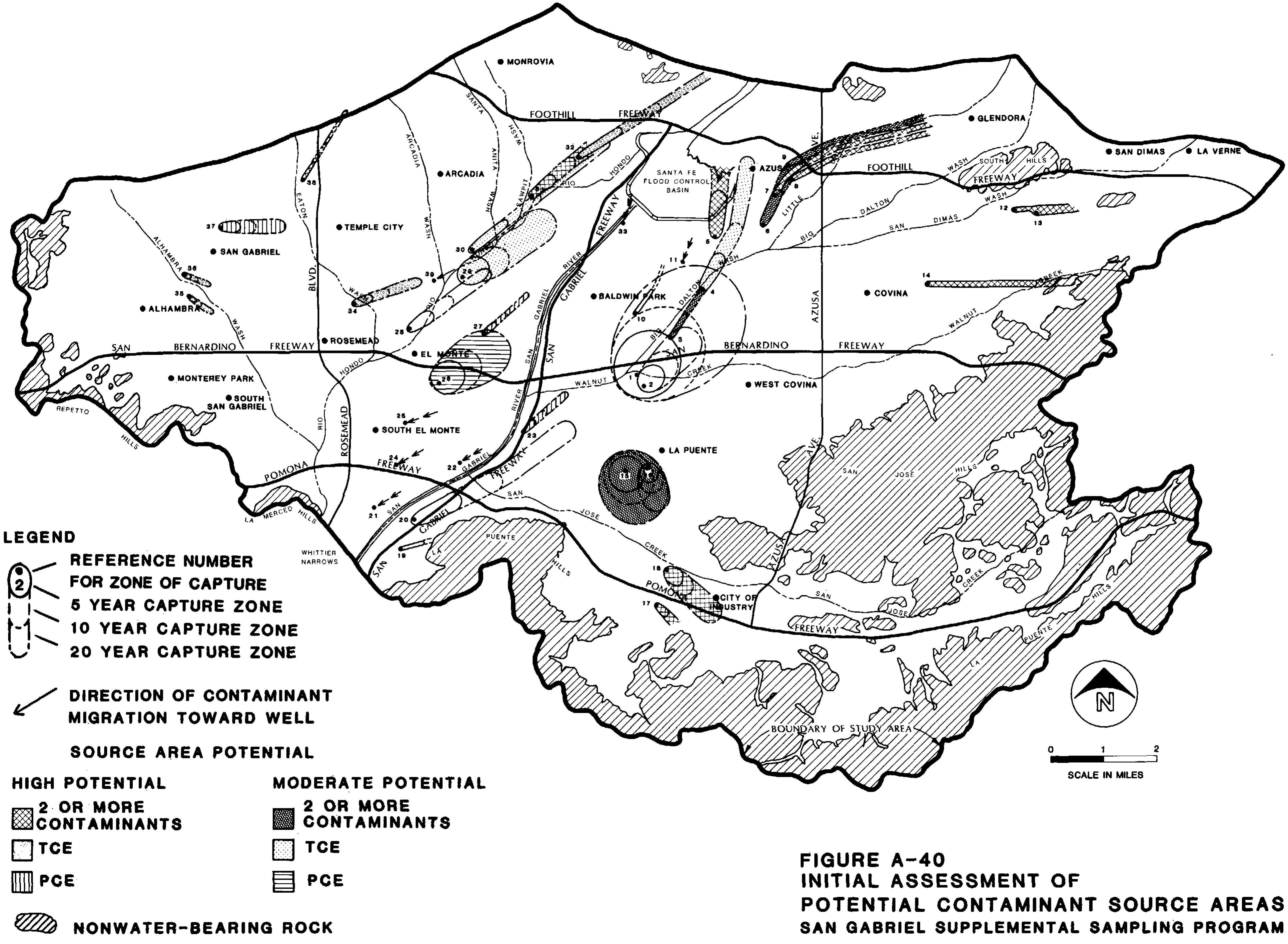


FIGURE A-40
INITIAL ASSESSMENT OF POTENTIAL CONTAMINANT SOURCE AREAS
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

Thirty-nine potential source areas are shown in Figure A-40. A single zone of capture may include several wells in proximity. Wells with low pumping rates and located in areas with moderate or high groundwater flow velocities, exhibit a very narrow zone of capture. As a very narrow zone of capture is more susceptible to local and seasonal variations in flow direction and velocity, the zone of capture for these wells is represented in Figure A-40 by arrows oriented in the average flow direction. Pumping data was not available for wells 08000049 and A1902032 (zone of capture No. 24 and 25 in Figure A-40), and consequently their source areas are also shown as arrows.

The following parameters are required to define a zone of capture: aquifer thickness, velocity and direction of uniform regional flow field, rate of discharge, and effective porosity. The values of these parameters for the wells included in the analysis are summarized in Table A-17. The calibrated values of specific yield (Figure A-31) were assumed to be approximately equal to the effective porosity. A well diameter of 1 foot is assumed for all wells. The total screened interval length is used for the aquifer thickness. An aquifer thickness of 250 feet was assumed for wells with no record of their screened interval.

Based on this analysis, potential source areas have been identified. These areas have been characterized as having either moderate or high probability of being source areas. This distinction was based on the following criteria:

- Location in the groundwater flow field with respect to other contaminant source areas

- Level of contamination in the downgradient wells

Table A-17
ZONE OF CAPTURE BASELINE DATA

Zone of Capture No.[a]	Actual Well Number/s	Aquifer Thickness[b] (ft)	Average Pore Velocity[c] (ft/yr)	Well Discharge[d] (GPM)
1	71900721 71903093	186	425	3754
2	08000062 01902859	250[e]	290	857
3	01900035	335	510	297
4	01900882	259	670	863
5	01900034 08000060	224 300	735 735	900 158
6	01900029	103	665	138
7	11900038	250[e]	240	315
8	01900831	222	280	320
9	01902537	305	950	513
10	08000039	250[e]	575	55
11	01902169	250[e]	900	14
12	01902270	87	3195	149
13	01902271	87	3195	172
14	01901686	99	2080	414
15	91901437 91901439	250[e]	140	1407
16	01900337 01901596	250[e]	160	424
17	01901617	98	233	68
18	31902819 31902820	250[e]	233	465
19	01900052	250[e]	475	125
20	81902525	250[e]	870	1230
21	01900001	80	1000	30
22	01900331	250[e]	310	35

Table A-17 (Continued)

Zone of Capture No.[a]	Actual Well Number/s	Aquifer Thickness[b] (ft)	Average Pore Velocity[c] (ft/yr)	Well Discharge[d] (GPM)
23	01902951	250[e]	275	138
24	08000049	-	620	No Data
25	A1902032	-	350	No Data
26	01901694	85	290	438
27	01901521 01901522	39	280	35
28	01901695	40	450	77
29	21900749 A1900749	428	370	1727
30	01902948	250[e]	425	138
31	01901014 01902017 01902018	378	500	727
32	01900356	250[e]	910	584
33	01902241	250[e]	1170	83
34	11901055	250[e]	320	229
35	01900012	381	140	77
36	01900013	381	140	77
37	01901681	468	285	566
38	01900026	702	400	224
39	01902027	636	450	115

[a] see Figure A-40

[b] total screened interval length

[c] from modeling results October 1977-June 1984

[d] average pumping rate 1974-June 1984

[e] assumed

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- Number of contaminated downgradient wells

- Temporal variations of levels of contamination in downgradient wells

The last criterion refers to some wells currently with low or no detectable levels of contamination which have previously shown high levels of contamination. Such wells may be close to a source area that is no longer contributing contamination to the groundwater. Alternatively, this phenomenon may have been caused by a portion of a plume of contamination moving into the zone of capture of such a well. In either case, contamination may have moved downgradient and a source area should be determined. The results of this analysis are shown in Figure A-40.

A.5.5.2.3 Discussion of Results

Of particular note, are the source areas extending southwest, i.e., downgradient from the Azusa area (areas 1 through 11, Figure A-40). It is possible that, if contaminants have been migrating for 30 to 40 years, sources in the Azusa area may be responsible for most downgradient contamination. It should also be noted that based on the average flow directions and the zone of capture analyses, there are possibly two distinct sources of high level contamination in the Azusa area: sources associated with contamination in zone of capture area No. 5 and source areas associated with the contamination in zone of capture areas 6 through 9.

A sensitivity analysis has been conducted to determine the model response to variations in the input parameters and is summarized in Figure A-41 and Table A-18. Changing input variables by a factor of 2 resulted in, at most, a

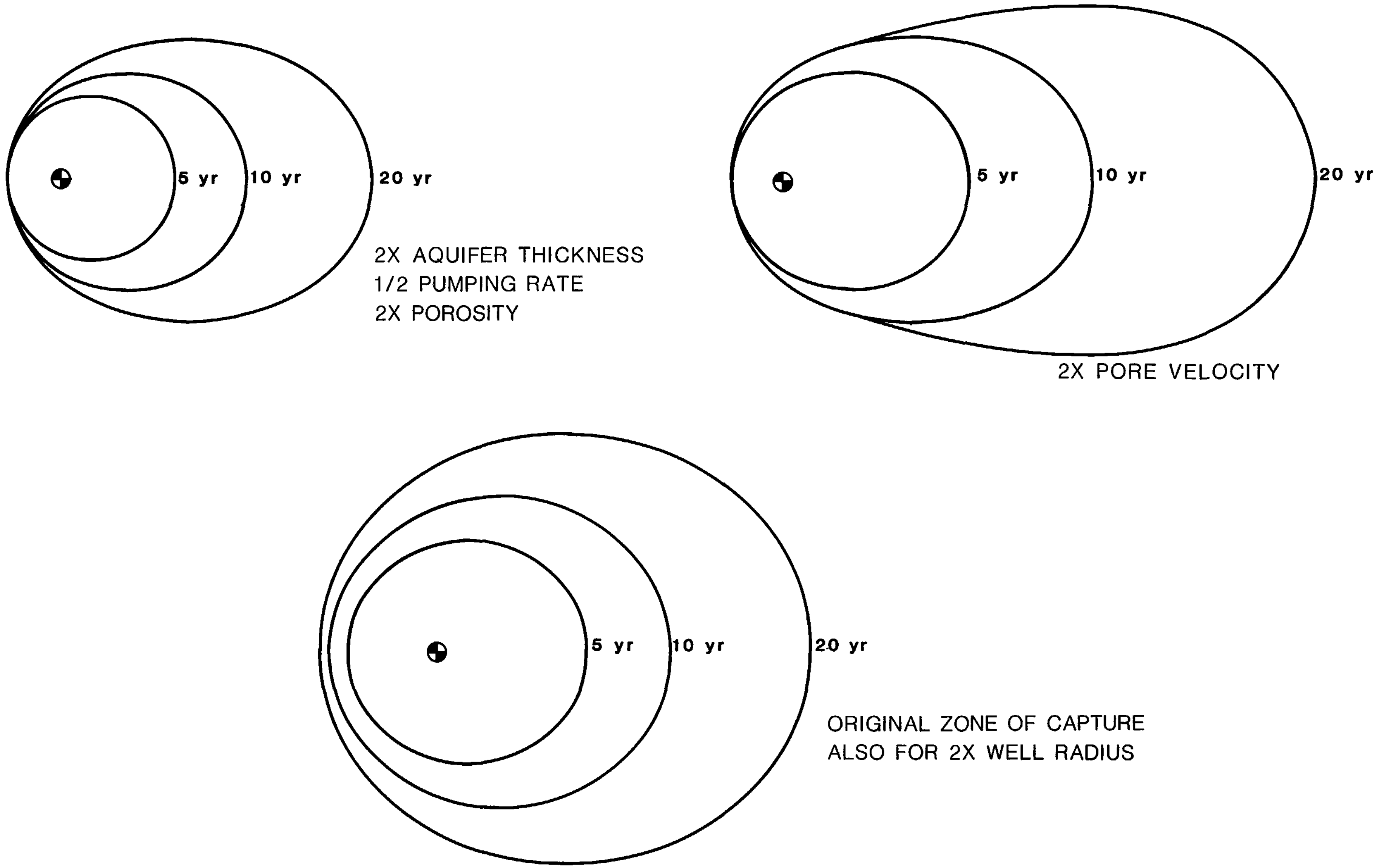


FIGURE A-41
ZONE OF CAPTURE (RESSQ)
SENSITIVITY ANALYSIS
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

35.7 percent change in zone of capture width and a 26.7 percent change in length. Another factor affecting the zone of capture, not quantitatively included in this analysis, is the effect of other pumping wells near a well analyzed. These nearby pumping wells, if included in the analysis, might have the effect of enlarging the zone of capture. Therefore, the potential source areas may extend over a larger area than those presented here.

Table A-18
SENSITIVITY OF ZONE OF CAPTURE CALCULATIONS TO INPUT PARAMETERS

Change In Parameter[a]	Change[b] in Width (percent)	Change[b] in Length (percent)
2X aquifer thickness[c]	-35.7	-23.0
2X pore velocity	-21.8	26.7
1/2 pumping rate[c]	-35.7	-23.0
2X porosity[c]	-35.7	-23.0
2X well radius	0	0

[a]As compared to zone of capture for wells 71900721 and 71903093 (combined).

[b]See Figure A-40.

[c]The effects of changing each of these parameters are similar as shown in Figure A-41.

Given the simplifying assumptions used in this analysis, the calculated potential source regions should be considered as a first approximation. However, this analysis is expected to be a very useful tool when used in conjunction with an inventory of contaminants used or generated by industry in the potential sources areas. It may be appropriate to base the refined analysis on more sophisticated techniques in order to better delineate potential sources. Further analyses are expected to incorporate the effects of contaminant degradation, dispersion, and adsorption. The careful evaluation of the areas identified by this analysis may provide the additional information necessary to conduct a refined analysis.

A.5.5.3 Potential Migration of Contaminants

If no remedial actions are undertaken to either contain or remove and treat the contaminated groundwater, the contamination will spread. An analysis was made to evaluate the potential movement of groundwater from areas contaminated with volatile organic compounds.

A.5.5.3.1 Methodology

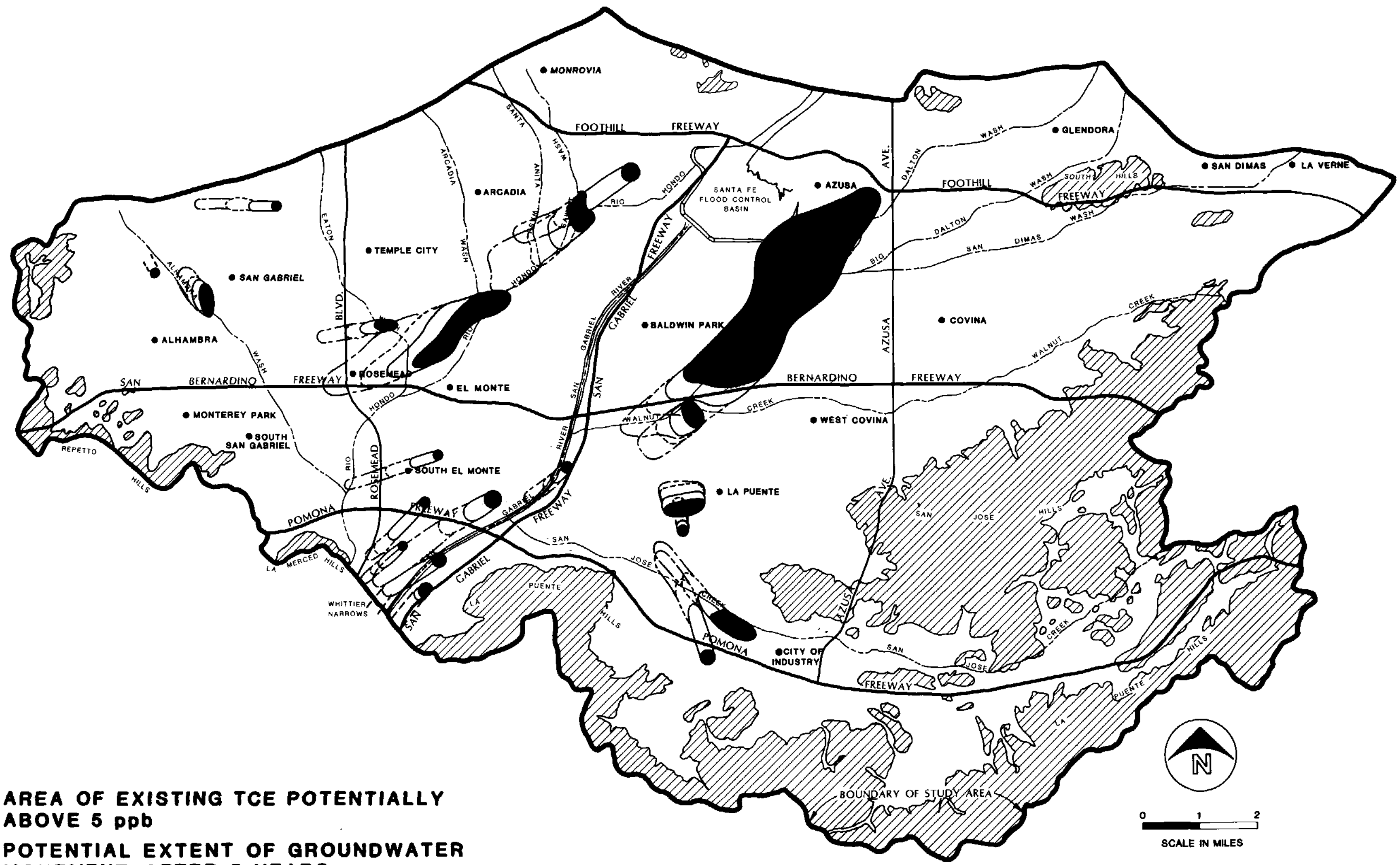
Based upon the results of the evaluation of the regional flow field in the basin (Section A.5.5.1), it was assumed that an average flow field would be acceptable for the preliminary evaluation of potential migration of contaminants. For this initial evaluation, the mechanisms of dispersion, retardation, and degradation in the subsurface were neglected. Therefore, the dominant mechanism of subsurface transport of contaminants is assumed to be advection due to groundwater flow.

Based on these assumptions, the TCE contamination in excess of 5 ppb, PCE contamination in excess of 4 ppb, and CTC contamination in excess of 5 ppb (Plates 1, 2, and 3, respectively) were advected downgradient for periods of 5, 10, and 20 years. The advection was based on the average groundwater velocities and flow directions shown in Figure A-39, except for the small plumes located just outside the model area. For these plumes, groundwater velocities were calculated using Equation A-27, with an average gradient determined from LACFCD water level maps (1982).

A.5.5.3.2 Results and Discussion

The possible future locations of groundwater contaminated with TCE, PCE, and CTC at levels greater than or equal to the action levels associated with these contaminants are shown in Figures A-42 through A-44, respectively. It is readily apparent from these figures that the potential for subsurface migration of these contaminants is significant. Especially in areas where the groundwater velocity is great, contaminants might migrate up to several miles in the next 5 to 20 years. In addition, what currently appear to be separate and distinct contamination plumes may merge, forming larger plumes.

In this analysis, the upgradient extent of the contaminant plumes have been allowed to remain stationary. This reflects the current uncertainty about the nature and locations of the sources of contamination. If there is an existing source contributing contaminants to the groundwater, as for example, contaminants in the unsaturated zone being periodically leached into the water table, or if contaminants are gradually being desorbed from the aquifer material, the upgradient extents of contamination may remain relatively stationary for some time. If this is the case, the size of the area of contamination will increase markedly, as indicated in Figures A-41 through A-43. However, if the existing plumes are the result of previous contamination having reached the groundwater zone and are not receiving additional contamination from current sources, then, in the absence of sorbing-desorbing phenomena, the upgradient extent of contamination is likely to move downgradient with the rest of the plume. If this is the case, the size of the area of contamination may not increase as significantly. In addition, if the contaminants are subject to retardation or degradation in the subsurface, the potential spread of the contamination would be less than is shown here. On the other hand, the effects of mechanical dispersion of contaminants in the subsurface and local scale heterogeneities in the groundwater flow field, which have been neglected here,



LEGEND

AREA OF EXISTING TCE POTENTIALLY ABOVE 5 ppb

POTENTIAL EXTENT OF GROUNDWATER MOVEMENT AFTER 5 YEARS

POTENTIAL EXTENT OF GROUNDWATER MOVEMENT AFTER 10 YEARS

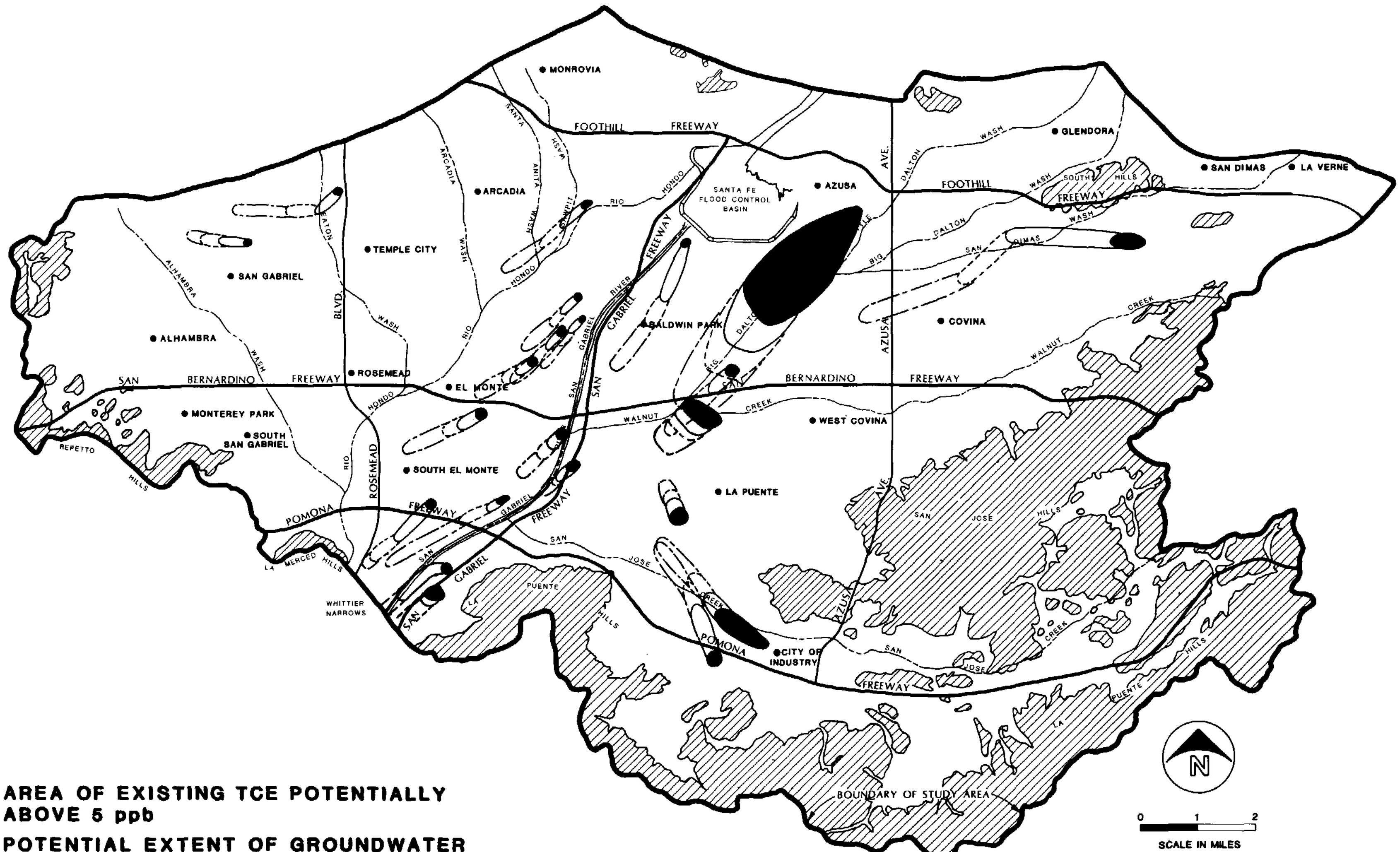
POTENTIAL EXTENT OF GROUNDWATER MOVEMENT AFTER 20 YEARS

NONWATER-BEARING ROCK

FIGURE A-42

POTENTIAL MOVEMENT OF GROUNDWATER FROM AREAS WITH EXISTING TCE CONTAMINATION

SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



LEGEND

AREA OF EXISTING TCE POTENTIALLY ABOVE 5 ppb

POTENTIAL EXTENT OF GROUNDWATER MOVEMENT AFTER 5 YEARS

POTENTIAL EXTENT OF GROUNDWATER MOVEMENT AFTER 10 YEARS

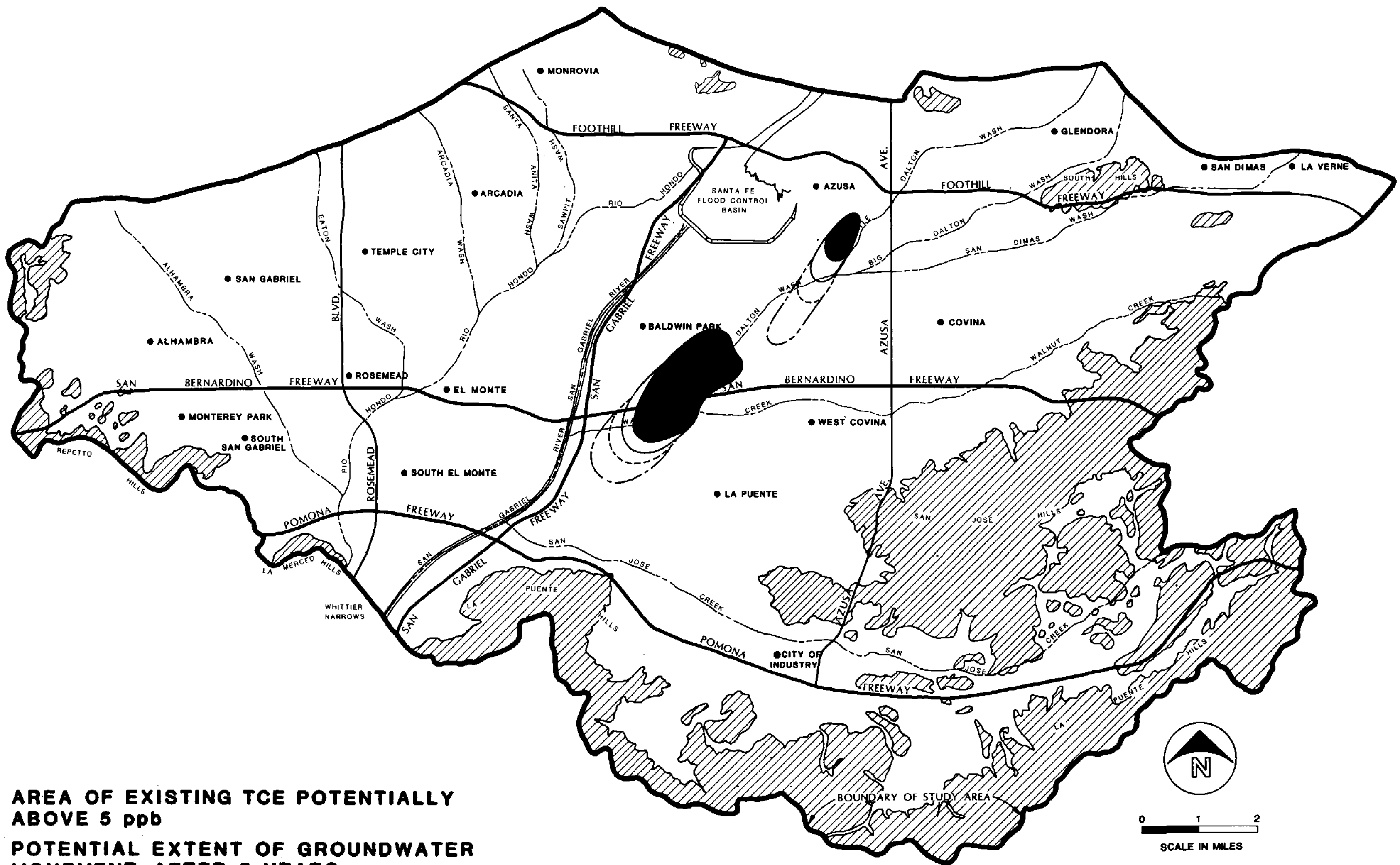
POTENTIAL EXTENT OF GROUNDWATER MOVEMENT AFTER 20 YEARS

NONWATER-BEARING ROCK

FIGURE A-43

POTENTIAL MOVEMENT OF GROUNDWATER FROM AREAS WITH EXISTING PCE CONTAMINATION

SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM



LEGEND

AREA OF EXISTING TCE POTENTIALLY ABOVE 5 ppb

POTENTIAL EXTENT OF GROUNDWATER MOVEMENT AFTER 5 YEARS

POTENTIAL EXTENT OF GROUNDWATER MOVEMENT AFTER 10 YEARS

POTENTIAL EXTENT OF GROUNDWATER MOVEMENT AFTER 20 YEARS

NONWATER-BEARING ROCK

FIGURE A-44

POTENTIAL MOVEMENT OF GROUNDWATER FROM AREAS WITH EXISTING CTC CONTAMINATION

SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

would tend to increase the spread of contamination although potentially lower the average concentration of contaminants. Further analysis will be required to more accurately predict the possible spread of contamination in the basin. This refined level of analysis, including an evaluation of the magnitude of the effects of retardation, degradation, and dispersion, will be addressed in later stages of the RI/FS. For this stage of the investigation, the analysis presented above is adequate to define potential problems and to focus future investigation activities.

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LASG2/011

DRAFT
SAN GABRIEL
SUPPLEMENTAL SAMPLING PROGRAM
REPORT

VOLUME 3 of 3 - APPENDIX B
SAMPLE DOCUMENTATION

SAN GABRIEL BASIN
LOS ANGELES, CA

WA 105.9L27.1

May 19, 1986

CONTENTS

TABLES

CONTENTS (Continued)

LASG3/019

Appendix B
SAMPLE DOCUMENTATION

B.1 INTRODUCTION

One of the primary objectives of the San Gabriel Supplemental Sampling Program (SSP) has been to collect and compile data on contaminants in the groundwater of the San Gabriel Basin; and in particular, volatile and semi-volatile organic contaminants. Information on nitrate contamination was specifically excluded from this compilation. The data compilation is comprised of two parts: (1) field collection of water samples for analysis and (2) collection of existing data on groundwater contamination. This appendix presents data collected by CH2M HILL, Inc., Stetson Engineers Inc., and the California Department of Health Services (CDHS) during 1985. These data and previous data collected in the San Gabriel Basin have been entered into a computerized data base system, referred to as TDM II (CH2M HILL, 1985b), for ease of storage, retrieval, analysis and display.

Throughout the remainder of this appendix, results for analyses by wells are presented using the TDM II well designation. This designation is an eight digit number and it is generally a modification of the well's state recordation number. For example, if the well's recordation number is 1900831, the TDM II designation is 01900831. Section B.3.1 presents a cross-reference listing which can be used to cross reference the TDM II designation with other designations for the same well, including the well owner's designation.

B.2 SAMPLING AND FIELD ACTIVITIES

During 1985, groundwater sampling was sponsored by the Upper San Gabriel Valley Municipal Water District (USGVMWD), the San Gabriel Valley Municipal Water District (SGVMWD), California Department of Health Services (CDHS) and the U.S. Environmental Protection Agency (EPA). Stetson Engineers carried out a sampling program for the USGVMWD and SGVMWD in response to California State Assembly Bill 1803 (AB 1803). The CDHS conducted water quality sampling as part of their routine regulatory activities and to confirm the results of the AB 1803 sampling. CH2M HILL collected groundwater samples under contract to the U.S. Environmental Protection Agency (EPA) as a part of the ongoing Superfund activities for the San Gabriel Basin. The sampling programs conducted in response to AB 1803 and the Supplemental Sampling are described in the following subsections.

B.2.1 AB 1803 SAMPLING

California State AB 1803 requires that public water systems with more than 200 services initiate a one-time monitoring program to qualitatively and quantitatively determine the presence of organic chemicals in the groundwater (though further monitoring may be required if contamination is found). The Upper San Gabriel Valley Municipal Water District (USGVMWD) and San Gabriel Valley Municipal Water District (SGVMWD) sponsored the monitoring program for the San Gabriel Basin.

Stetson Engineers (1984) prepared a plan to sample groundwater in the San Gabriel Basin. Existing groundwater production wells were identified for the analysis of selected organic compounds. The specific analysis identified depended on the location of the well with respect to potential sources of contamination. Potential sources of contaminants were identified by Stetson Engineers (1984).

Stetson Engineers sampled 119 wells and the groundwater samples were selectively analyzed for volatile organic compounds (35 separate constituents), semi-volatile organic compounds (81 separate constituents), and agricultural chemicals and miscellaneous organic analysis (25 separate constituents). The specific constituents in each category are identified in Tables B-1 through B-3 respectively. The wells sampled by Stetson Engineers are shown in Figure B-1. The specific sampling procedures, chain-of-custody requirements and analytical procedures associated with the AB 1803 program are given in a report prepared by Stetson Engineer's (1984).

Of the 141 contaminants tested for, 14 were found in the samples collected under the AB 1803 program. Table B-4 lists the constituents reported by Stetson Engineers (1985); along with the recommended California Department of Health Services action levels for these contaminants. Trichloroethylene (TCE), Perchloroethylene or Tetrachloroethylene (PCE), Carbon Tetrachloride (CCl_4), and 1,1-Dichloroethylene proved to be the most commonly occurring contaminants (Stetson Engineers, 1985). Table B-5 is a reproduction of Appendix C presented by Stetson Engineers (1985), which identifies those wells and contaminants found above their respective detection limits. Of the 119 wells sampled, 55 contained one or more of the organic chemicals tested. Of the 55 wells, 32 contained contaminants at or above the recommended CDHS action levels.

Table B-1
EPA METHOD 624
PURGEABLE ORGANIC ANALYSIS
(VOLATILES)

Benzene	cis-1,3-Dichloropropene
Bromodichloromethane	1,1-Dichloroethane
Bromoform	1,2-Dichloroethane
Bromomethane	Trans-1,3-Dichloropropene
Carbon Tetrachloride	Ethyl benzene
Chlorobenzene	Methylene chloride
Chloroethane	Methyl Ethyl Ketone
2-Chloroethylvinyl ether	Methyl Isobutyl Ketone
Chloroform	1,1,2,2-Tetrachloroethane
Chloromethane	Tetrachloroethylene
Dibromochloromethane	Toluene
1,2-Dichlorobenzene	1,1,1-Trichloroethane
1,3-Dichlorobenzene	1,1,2-Trichloroethane
1,4-Dichlorobenzene	Trichloroethylene
Dichlorodifluoromethane	Trichlorofluoromethane
1,1-Dichloroethylene	Vinyl chloride
Trans-1,2-Dichloroethylene	Xylenes
1,2-Dichloropropane	

Table B-2
EPA METHOD 625
SEMI-VOLATILE
ORGANIC ANALYSES

Acenaphthene
Acenaphthylene
Anthracene
Aldrin
Benzo(a)anthracene
Benzo(b)fluoranthene
Benzo(k)fluoranthene
Benzo(a)pyrene
Benzo(ghi)perylene
Benzyl butyl phthalate
α-BHC
β-BHC
Bis(2-chloroethyl)ether
Bis(2-chloroethoxy)methane
Bis(2-ethylhexyl)phthalate
Bis(2-chloroisopropyl)ether
4-Bromophenyl phenyl ether
Chlordane
2-Chloronaphthalene
4-Chlorophenyl phenyl ether
Chrysene
4,4'-DDD
4,4'-DDE
4,4'-DOT
Dibenzo(a,h)anthracene
Di-n-butylphthalate
1,3-Dichlorobenzene
1,2-Dichlorobenzene
1,4-Dichlorobenzene
3,3'-Dichlorobenzidine
Dieldrin
Diethyl phthalate
Dimethyl phthalate
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Di-n-octylphthalate
Endosulfan sulfate
Endrin aldehyde
Fluoranthene
Fluorene
Heptachlor
Heptachlor epoxide
Hexachlorobenzene
Hexachlorobutadiene
Hexachloroethane
Indeno(1,2,3-cd)pyrene
Isophorone
Naphthalene
Nitrobenzene
N-Nitrosodi-n-propylamine
PCB-1016
PCB-1221
PCB-1232
PCB-1242
PCB-1248
PCB-1254
PCB-1260
Phenanthrene
Pyrene
Toxaphene
1,2,4-Trichlorobenzene

Acid Extractables

4-Chloro-3-methylphenol
2-Chlorophenol
2,4-Dichlorophenol
2,4-Dimethylphenol
2,4-Dinitrophenol
2-Methyl-4,6-dinitrophenol
2-Nitrophenol
4-Nitrophenol
Pentachlorophenol
Phenol
2,4,6-Trichlorophenol

Additional Extractable Parameters

Benzidine
δ-BBC
γ-BBC
Endosulfan I
Endosulfan II
Endrin
Hexachlorocyclopentadiene
N-Nitrosodimethylamine
N-Nitrosodiphenylamine

Table B-3
AGRICULTURAL CHEMICALS
AND MISCELLANEOUS ORGANIC ANALYSES

Acephate (Orthene)	Diazinon
Atrazine (AAtrex)	Dicofol (Kelthane)
Benomyl (Benlate)	Dimethoate (Cygon)
Bromacil (Hyvar)	Diphenamid (Enide)
Captan	Diuron (Karmex)
Carbaryl	Lindane (BHC)
Carbofuran (Furadan)	Methomyl (Lannate)
Chloropicrin	Methyl bromide
Chloropyrifos	Nemagon (DBCP)
Chlorothalonil (Bravo)	Paraquat
D-D mixture	Parathion
2,4-D	Simazine (Princep)
	Toxaphene

Table B-4
SUMMARY OF CONSTITUENTS FOUND DURING AB 1803 SAMPLING

Volatiles	Recommended Action Levels (ppb)
Trichloroethylene	5.0
Tetrachloroethylene	4.0
Carbon Tetrachloride	5.0
1,1-Dichloroethylene	6.0
1,2-Dichloroethane	1.0
Methylene Chloride	40.0
1,1,1-Trichloroethane	200.0
Chloroform	None
1,1-Dichloroethane	None
Trans-1,2-Dichloroethylene	16.0
Semi-Volatiles	
M,P-Xylene	620.0*
O-Xylene	620.0*
Pesticides	
Simazine (Princep)	None
Atrazine (AAtrex)	None

*Levels are for single isomer or for total sum of isomers

B.2.2 SUPPLEMENTAL SAMPLING

The supplemental sampling of groundwater by CH2M HILL comprised three parts: quality assurance sampling, source sampling in the vicinity of industries which may be sources of contaminants, and general sampling to aid in delineating the extent of groundwater contamination.

In general, the SSP analyzed the same list of compounds presented in Tables B-1 through B-3; however, there are a few minor differences, primarily the inclusion of a smaller number of agricultural chemicals. Tables B-6 through B-8 present the specific lists of compounds analyzed by the EPA contract laboratories. Unless otherwise specified, these compounds are the volatile, semi-volatile, and agricultural chemical compounds referenced throughout the remainder of this appendix.

Table B-5
RESULTS OF AB 1803 SAMPLING

LIST OF WELLS
WITH POSITIVE RESULTS

SYSTEM	WELL	CONSTITUENT	RESULTS (ppb)
South Pasadena	2 Wilson	Tetrachloroethene	13.0
Alhambra	7	Carbon Tetrachloride	0.6
Alhambra	7 (Resample)	Carbon Tetrachloride	0.6
Alhambra	8	Trichloroethene	1.1
Alhambra	8 (Resample)	Trichloroethene	1.2
Alhambra	12	Trichloroethene	12.0
Alhambra	12 (resample)	1,1-Dichloroethene	1.2
		Trichloroethene	9.3
Cal. Amer. Water - SM	Blue Ribbon 1	Tetrachloroethene	0.5
		Trichloroethene	6.8
San Gabriel Co. WD	10	Tetrachloroethene	1.6
San Gabriel Co. WD	5 Bra	Chloroform	0.2
		Tetrachloroethene	0.1
San Gabriel Co. WD	5 Bra (Resample)	Tetrachloroethene	0.3
Monterey Park	12	Tetrachloroethene	0.5
		Trichloroethene	1.0
Monterey park	12 (duplicate)	Tetrachloroethene	0.5
		Trichloroethene	1.3
Monterey Park	12 (resample)	Tetrachloroethene	0.8
		Trichloroethene	1.4
Monterey Park	12 (resample Replicate)	Tetrachloroethene	0.8
		Trichloroethene	1.9
El Monte	5	Tetrachloroethene	0.8
		Trichloroethene	12.0
El Monte	4	Methylene Chloride	4.7
		Tetrachloroethene	16.0
El Monte	Mountain View	Tetrachloroethene	1.4
		1,1,1-trichloroethane	0.3
		Trichloroethene	2.0

Table B-5 (continued)

El Monte	Mountain View (Dup.)	Atrazine (aatrex)	1.08
San Gabriel Valley WC	B1	Tetrachloroethene	1.1
		Trichloroethene	5.4
San Gabriel Valley WC	B1 (resample)	1,1-Dichloroethene	1.3
		Tetrachloroethene	1.8
		1,1,1-Trichloroethane	2.5
		Trichloroethene	12.0
Whittier, City of	9	Trichloroethene	1.4
Arcadia	1 St. Joseph	1,1,1-Trichloroethane	0.5
Arcadia	2 Longden	1,1-Dichloroethene	5.3
		Tetrachloroethene	3.3
		1,1,1-Trichloroethane	12.0
		Trichloroethene	62.0
Arcadia	1 Peck Rd. (Dup)	Simazine (princep)	0.75
Arcadia	1 Longden	1,1-Dichloroethene	5.3
		Tetrachloroethene	2.0
		1,1,1-Trichloroethane	12.0
		Trichloroethene	42.0
So. Cal. Water Co.-SGV	2 Jefferies	1,1-Dichloroethene	20.0
		Methylene Chloride	6.0
		Tetrachloroethene	6.0
		1,1,1-Trichloroethane	54.0
		Trichloroethene	140.0
So. Cal. Water Co.-SGV	1 Farna	Tetrachloroethene	0.9
		Trichoroethene	3.5
So. Cal. Water Co.-SGV	2 Graydon	Trichloroethene	3.2
So. Cal. Water Co.-SGV	2 Farna	Tetrachloroethene	1.4
		Trichloroethene	9.1
So. Cal. Water Co.-SGV	1 Persimmon	Tetrachloroethene	3.9
		Trichloroethene	25.0
So. Cal. Water Co.-SVG	1 Persimmon (Dup)	Atrazine (aatrex)	1.67
So. Cal. Water Co.-SGV	1 Jefferies	Methylene Chloride	10.0
		Tetrachloroethene	8.0
		1,1,1-Trichloroethane	31.0
		Trichloroethene	98.0
So. Cal. Water Co.-SGV	3 Jefferies	Tetrachloroethene	1.2
		1,1,1-Trichloroethane	8.8
		Trichloroethene	31.0

Table B-5 (continued)

So. Cal. Water Co.-SGV	3 Jefferies (resample)	Chloroform	0.6
		Trans-1,2-Dichloroethene	2.4
		Tetrachloroethene	1.7
		Trichloroethene	25.0
		1,1,1-Trichloroethane	29.0
San Gabriel Valley WC	2C	Tetrachloroethene	2.2
		Trichloroethene	16.0
		m,p-Xylene	0.3
		o-Xylene	0.2
San Gabriel Valley WC	2D	Trichloroethene	3.3
San Gabriel Valley WC	2D (duplicate)	Trichloroethene	4.0
Rurban Homes Mutual WC	2 South	Tetrachloroethene	4.4
Richwood Mutual WC	1 South (resample)	Tetrachloroethene	17.0
California Domestic WC	5 (resample)	Tetrachloroethene	2.0
California Domestic WC	5 (replicate)	Tetrachloroethene	2.0
City of Industry WWS	1	Tetrachloroethene	1.5
		Trichloroethene	0.9
City of Industry WWS	1 (duplicate)	Atrazine (aatrex)	1.13
Cal. Amer. Water-Duarte	Mountain Ave.	Tetrachloroethene	0.3
		1,1,1-Trichloroethane	0.6
		Trichloroethene	1.6
Cal. Amer. Water-Duarte	Mountain Ave. (resample)	Chloroform	7.9
		Trans-1,2-Dichloroethene	1.5
		Methylene Chloride	3.7
		Tetrachloroethene	0.7
		1,1,1-Trichlorothane	7.2
		Trichloroethene	7.7
Cal. Amer. Water-Duarte	Mountain Ave. (replicate)	Chloroform	7.8
		Trans-1,2-Dichloroethene	2.0
		Methylene Chloride	1.3
		Tetrachloroethene	0.5
		1,1,1-Trichloroethane	8.4
		Trichlorothene	9.3
Valley County WD	Paddy Lane	Carbon Tetrachloride	16.0
		Tetrachlorothene	0.6
		Trichloroethene	5.0
Valley County WD	Palm	Carbon Tetrachloride	29.0
		Trichloroethene	0.3
Valley County WD	Palm (duplicate)	Carbon Tetrachloride	20.0
		Trichloroethene	0.3

Table B-5 (continued)

Valley County Wd	N. Main East	Tetrachloroethene	0.7
		Trichloroethene	3.6
Valley County WD	Morada	Carbon Tetrachloride	20.0
		Chloroform	54.0
		1,2-Dichloroethane	5.3
		1,1-Dichloroethane	8.5
		1,1-Dichloroethene	2.8
		t-1,2-Dichloroethene	47.0
		Tetrachloroethene	100.0
		Trichloroethene	440.0
Covina Irrigating Co.	Valencia	Tetrachloroethene	0.4
Covina Irrigating Co.	3 Bal	Carbon Tetrachloride	2.9
		Chloroform	1.7
		1,2-Dichloroethane	3.7
		1,1-Dichloroethane	2.6
		1,1-Dichloroethene	1.1
		t-1,2-Dichloroethene	2.9
		Tetrachloroethene	10.0
		1,1,1-Trichloroethane	1.0
		Trichloroethene	108.0
Covina Irrigating Co.	3 Bal (resample)	Carbon Tetrachloride	3.0
		Chloroform	3.0
		1,1-Dichloroethane	4.0
		Methylene Chloride	2.0
		1,1-Dichloroethene	2.1
		Trans-1,2-Dichloroethene	1.5
		Tetrachloroethene	8.9
		1,1,1-Trichlorothane	5.2
		Trichloroethene	52.0
Monrovia	1	Chloroform	1.0
		Tetrachloroethene	0.3
		Trichloroethene	0.7
Monrovia	1 (resample)	Chloroform	1.7
		Tetrachloroethene	0.6
		Trichloroethene	1.5
Monrovia	1(replicate)	Chloroform	1.8
		Tetrachloroethene	0.4
		Trichloroethene	1.4
San Gabriel Valley WC	B6B	Carbon Tetrachloride	17.0
		Chloroform	5.2
		1,2-Dichloroethane	4.4
		1,1-Dichloroethene	1.1
		t-1,2-Dichloroethene	4.4
		Tetrachloroethene	1.8
		Trichloroethene	111.0

Table B-5 (continued)

San Gabriel Valley WC	B6B (resample)	Carbon Tetrachloride	14.0
		Chloroform	3.1
		1,2-Dichloroethane	0.2
		1,1-Dichloroethene	1.0
		Tetrachloroethene	1.2
		Trichloroethene	39.0
San Gabriel Valley WC	B6C	Carbon Tetrachloride	13.0
		Chloroform	3.4
		1,2-Dichloroethane	3.4
		Tetrachloroethene	6.4
		Trichloroethene	76.0
San Gabriel Valley WC	B6C (resample)	Carbon Tetrachloride	7.2
		Chloroform	1.5
		1,1-Dichloroethene	0.5
		Tetrachloroethene	2.5
		Trichloroethene	17.0
San Gabriel Valley WC	B5B	Carbon Tetrachloride	2.3
		1,1,1-Trichloroethane	2.5
		Trichloroethene	0.6
San Gabriel Valley WC	B9	Carbon Tetrachloride	2.0
		Tetrachloroethene	3.9
		Trichloroethene	37.0
San Gabriel Valley WC	B11A	Carbon Tetrachloride	0.9
		Chloroform	0.8
		1,2-Dichloroethane	2.1
		Trichloroethene	12.0
San Gabriel Valley WC	B11A (duplicate)	Carbon Tetrachloride	0.8
		Chloroform	0.8
		1,2-Dichloroethane	2.0
		Trichloroethene	10.0
San Gabriel Valley WC	B4C	Carbon Tetrachloride	10.4
		Tetrachloroethene	3.8
		Trichloroethene	1.8
San Gabriel Valley WC	B7C	Tetrachloroethene	9.4
		Trichloroethene	10.0
City of Azusa	5	Trichloroethene	1.3
City of Azusa	6	Tetrachoroethene	1.0
Suburban Water System	139 W2	Tetrachloroethene	0.6
		Trichloroethene	5.1
Suburban Water Systems	135 W1	Trichloroethene	0.6

Table B-5 (continued)

Suburban Water Systems	135 W1 (Duplicate)	Trichloroethene	0.8
Glendora	7-G	1,1-Dichloroethene	78.0
		Tetrachloroethene	2.7
		1,1,1-trichloroethane	100.0
		Trichloroethene	24.0
Suburban Water Systems	152 W1	Chloroform	0.4
		1,1-dichloroethane	0.1
		1,1-Dichloroethene	0.7
		Tetrachloroethene	0.3
		Trichloroethene	8.0
Suburban Water Systems	147 W1	1,1-Dichloroethene	0.2
		t-1,2-Dichloroethene	1.0
		Tetrachloroethene	1.2
		Trichloroethene	23.0
Suburban Water Systems	113 W1	1,1-Dichloroethene	0.1
		t-1,2-Dichloroethene	0.1
		Tetrachloroethene	0.8
		1,1,1-Trichloroethane	0.1
		Trichloroethene	0.5
Suburban Water Systems	140 W3	Chloroform	0.7
		Methylene Chloride	2.0
		Tetrachloroethene	0.7
		Trichloroethene	1.4
Suburban Water Systems	155 W1	1,1-Dichloroethene	16.0
		Tetrachloroethene	37.0
		1,1,1-Trichloroethane	12.0
		Trichloroethene	18.0
Suburban Water Systems	155 W2	t-1,2-Dichloroethene	16.0
		Tetrachloroethene	37.0
		1,1,1-Trichloroethane	14.0
		Trichloroethene	18.0
So. Cal. Water Co.-SD	Columbia 7	1,1-Dichloreothene	1.1
		Tetrachloroethene	15.0
		1,1,1-Trichloroethane	1.5
		Trichloroethene	2.6
So. Cal. Water Co.-SD	Columbia 8	Atrazine (aatrex)	1.37

TABLE B-6
LABORATORY: S-CUBED
EPA METHOD 624
PURGEABLE ORGANIC ANALYSES

Chloromethane	1,1,2,2-Tetrachloroethane
Bromomethane	1,2-Dichloropropane
Vinyl Chloride	Trans-1,3-Dichloropropene
Chloroethane	Trichloroethylene
Methylene Chloride	Dibromochloromethane
Acetone	1,1,2-Trichloroethane
Carbon Disulfide	Benzene
1,1-Dichloroethylene	Cis-1,3-Dichloropropene
1,1-Dichloroethane	2-Chloroethyl Vinyl Ether
Trans-1,2-Dichlorethylene	Bromoform
Chloroform	2-Hexanone
1,2-Dichloroethane	4-Methyl-2-Pentanone
2-Butanone	Perchloroethylene
1,1,1-Trichloroethane	Toluene
Carbon Tetrachloride	Chlorobenzene
Vinyl Acetate	Ethyl Benzene
Bromodichloromethane	Styrene
	Total Xylenes

Table B-7
LABORATORY: S-CUBED AND ERG
EPA METHOD 625
SEMI-VOLATILES
ORGANIC ANALYSES

N-Nitrosodimethylamine
Phenol
Aniline
Bis (2-Chloroethyl) Ether
2-Chlorophenol
1,3-Dichlorobenzene
1,4-Dichlorobenzene
Benzyl Alcohol
1,2-Dichlorobenzene
2-Methylphenol
Bis (2-Chloroisopropyl) Ether
4-Methylphenol
N-Nitro-Dipropylamine
Hexachloroethane
Nitrobenzene
Isophorone
2-Nitrophenol
2,4-Demethylphenol
Benzoic Acid
Bis (2-Chloroethoxy) Methane
2,4-Dichlorophenol
1,2,4-Trichlorobenzene
Naphthalene
4-Chloroaniline
Hexachlorobutadiene
4-Chloro-3-Methylphenol
(Para-Chloro-Meta-Cresol)
2-Methylnaphthalene
Hexachlorocyclopentadiene
2,4,6-Trichlorophenol
2,4,5-Trichlorophenol
2-Chloronaphthalene
2-Nitroaniline
Dimethyl Phthalate
3-Nitroanile
Acenaphthene
2,4-Dinitrophenol
4-Nitrophenol
Dibenzofuran
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Diethylphthalate
4-Chlorophenyl Phenyl Ether
Fluorene
4-Nitroanile
4,6-Dinitro-2-Methylphenol
N-Nitrosodiphenylamine
4-Bromophenyl Phenyl Ether
Hexachlorobenzene
Pentachlorophenol
Anthracene
Di-N-Butylphthalate
Fluorathene
Benzidine
Pyrene
Butyl Benzyl Phthalate
3,3'-Dichlorobenzidine
Benzo (A) Anthralene
Bis (2-Ethylhexyl) Phthalate
Chrysene
Di-N-Octyl Phthalate
Benzo (B) Fluoranthene
Benzo (K) Fluoranthene
Benzo (A) Pyrene
Indeno (1,2,3-CD) Pyrene
Dibenzo (A,H) Anthracene
Benzo (G,H,I) Pyrylene
Acenaphthylene

Table B-8
LABORATORY: CAMBRIDGE
AGRICULTURAL CHEMICALS
AND MISCELLANEOUS ORGANIC ANALYSES

Alpha-BHC
Beta-BHC
Delta-BHC
Gamma-BHC (Lindane)
Heptachlor
Aldrin
Heptachlor Epoxide
Endosulfan I
Dieldrin
4,4'-DDE
Endrin
Endosulfan II
4,4'-DDD
Endrin Aldehyde
Endosulfan Sulfate
4,4'-DDT
Endrin Ketone
Methoxychlor
Chlordane
Toxaphene
Aroclor-1016
Aroclor-1221
Aroclor-1242
Aroclor-1248
Aroclor-1254
Aroclor-1260

B.2.2.1 Quality Assurance Sampling

The primary purpose of the quality assurance (QA) sampling has been to provide a comparison of the laboratory test results obtained from the EPA Contract Laboratory Program (CLP) with those obtained from the laboratory used for the AB 1803 program (J.M. Montgomery Laboratories). As indicated by CH2M HILL (1985a), duplicate samples of approximately 16 percent of the wells proposed in the AB 1803 program were considered adequate for comparative purposes.

The wells sampled for both the AB 1803 program and for QA purposes are listed in Table B-9 and their locations are shown in Figure B-1. The wells identified in Table B-9 differ from the list of wells originally selected for QA purposes. Approval of the sampling plan was delayed and the AB 1803 sampling proceeded on schedule. Alternate wells for QA sampling were selected and 17 of the 119 wells sampled in the AB 1803 program were sampled for QA comparisons.

Table B-9
WELLS SAMPLED BY BOTH STETSON ENGINEERS AND CH2M HILL

08000039	01900029	01901686	01901525
01900031	01902117	01901526	31902819
01901596	01900831	01902115	31902820
01900337	01902537	01902425	01903067
01900027			

Table B-10 shows the comparison between results obtained from the AB 1803 and QA sampling programs. This table shows that of the constituents detected in the sample analyses, 22 of the AB 1803 results indicate higher concentrations, 14 indicate lower concentrations, and 14 results show no effective difference. The AB 1803 sampling shows the occurrence of 17 cases where contaminants were not identified by the QA sampling. The QA sampling indicates the occurrence of 10 cases where contaminants were not identified by the AB 1803 program. Most of the contaminants identified in the AB 1803 program and not in the QA sampling are due to the lower detection limits employed by the AB 1803 sampling program laboratory. Bis (2-ethylhexyl) Phthalate is the contaminant most commonly identified in the QA program and which has not been detected in the AB 1803 sampling. The occurrence of this compound is often related to contamination of the sample bottles supplied by a laboratory.

The differences in the results of the two analyses have been evaluated to determine if the differences fall within the quality control acceptance criteria specified in the Federal Register, Volume 49, Number 209, Friday, October 26, 1984. If the values for a given chemical constituent analyzed by the two laboratories falls within the 95 percent confidence interval for the mean of the two reported values; then, the two reported values are considered to be comparable given the precision of current laboratory analytical techniques.

The 95 percent confidence interval for a given chemical constituent is computed as follows:

1. Determine M, the mean, for the range of X given in Table B-11.

2. Determine the Relative Standard Deviation (RSD) as:

$$RSD = \frac{S}{M} \qquad \text{(B-1)}$$

Where S is from Table B-11

3. Determine, M_R, the mean of the two values from the different laboratories.

4. Compute, C_{95}, the 95 percent confident interval as:

$$2 \times RSD \times M \qquad \text{(B-2)}$$

If the values reported by the two laboratories lie with $M_R \pm C_{95}$, then the two values are considered comparable. The chemical concentrations reported by the two laboratories as shown in Table B-10 are considered comparable based on these acceptance criteria.

Table B-11 is applicable as long as the concentration of the compounds is relatively low; generally less than a few tens of parts per billion. As the concentration of contaminants increase, then the value of S must be corrected for higher concentrations. The method is described in the Federal Register reference cited above.

Table B-10
COMPARISON OF SSP RESULTS WITH
AB 1803 SAMPLING RESULTS FOR THOSE CONSTITUENTS
EXCEEDING THE LIMITS OF DETECTION

Well Number	Constituent	AB 1803 (ppb)	SSP (ppb)
08000039	Carbon Tetrachloride	29.0	9
	Trichloroethylene	0.3	<1
01900031	Carbon Tetrachloride	16.0	5
	Perchloroethylene*	0.6	<1
	Trichloroethylene	5.0	<1
	Methylene Chloride	<0.1	1
019001596	1,1-Dichloroethylene	0.2	<5
	Trans-1,2-Dichloroethylene	1.0	<5
	Perchloroethylene	1.2	<1
	Trichloroethylene	23.0	23
	Bis (2-Ethylhexyl) Phthalate	<5.0	17
01900337	Chloroform	0.4	<5
	1,1-Dichloroethane	0.1	<5
	1,1-Dichloroethylene	0.7	<5
	Perchloroethylene	0.3	<1
	Trichloroethylene	8.0	8.0
	Bis (2-Ethylhexyl) Phthalate	<5.0	18.0
01900029	Carbon Tetrachloride	20.0	6
	Chloroform	54.0	25
	1,2-Dichloroethane	5.3	4
	1,1-Dichloroethane	8.5	<5
	1,1-Dichloroethylene	2.8	1
	Trans-1,2-Dichloroethylene	47.0	10
	Perchloroethylene	100.0	29
	Trichloroethylene	440.0	370
01902117	Contaminants were not detected		
01900831	1,1-Dichloroethylene	78.0	25
	Perchloroethylene	2.7	<1
	1,1,1-Trichloroethane	100.0	170
	Trichloroethylene	24.0	8
01902537	Trichloroethylene	1.3	<1
	Bis (2-ethylhexyl) Phthalate	<5	60
01901686	Contaminants were not detected		
01901526	Contaminants were not detected		
01902115	Bis (2-ethylhexyl) Phthalate	<5	60

Table B-10 (Continued)

Well Number	Constituent	AB 1803 (ppb)	SSP (ppb)
01902425	Bis (2-Ethylhexyl) Phthalate	<5	60
01901525	Contaminants were not detected		
31902819	1,1-Dichloroethylene	16.0	8
	Perchloroethylene	37.0	42
	1,1,1-Trichloroethane	12.0	6
	Trichloroethylene	18.0	12
	Bis (2-Ethylhexyl) Phthalate	<5	18
31902820	Trans-1,2-Dichloroethylene	16.0	<5
	Perchloroethylene	37.0	46
	1,1,1-Trichloroethane	14.0	7
	Trichloroethylene	18.0	14
	1,1-Dichloroethylene	<0.1	10
	Bis (2-Ethylhexyl) Phthalate	<5	18
01903067	Chloroform	0.7	<5
	Methylene Chloride	2.0	<1[a]
	Perchloroethylene	0.7	<1
	Trichloroethylene	1.4	<1
	Bis (2-Ethylhexyl) Phthalate	<5	34
01900027	Contaminants were not detected		

*Same as Tetrachloroethylene

[a]Contamination found in blank sample

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Table B-11
QUALITY CONTROL ACCEPTANCE CRITERIA
FOR SELECTED CHEMICAL PARAMETERS

Parameter	Limit for S(μg/l)*	Range for X(μg/l)*
Carbon Tetrachloride	5.6	11.8-25.3
Chloroform	4.5	12.4-24.0
1,2-Dichloroethane	5.2	13.0-26.5
1,1-Dichloroethane	3.2	11.2-24.6
1,1-Dichloroethylene	6.6	10.2-27.3
Trans-1,2-Dichloroethylene	6.4	11.4-27.1
Perchloroethylene	5.4	8.1-29.6
Trichloroethylene	4.2	9.2-26.6

Notes:

S = Standard deviation of four recovery measurements, in μg/l

X = Average recovery for four recovery measurements, in μg/l

* Parts per billion (micrograms per liter)

B.2.2.2 Source Sampling

A total of 14 wells have been sampled in the vicinity of potential sources areas of contaminants, near Azusa, California. These wells have been analyzed for volatiles, semi-volatiles and specific compounds that have been reported to be used or disposed of in the area. Figure B-1 shows the locations of wells sampled for the source sampling program. Some of the same wells have also been sampled for the QA sampling described above.

In addition to the routine volatile and semi-volatile analyses, water samples taken from the source sampling wells were analyzed for the following compounds:

- Freon 113
- Xylidene
- Thiourea
- Hydrazine
- Perchlorate
- Selenium

Table B-12 lists the wells sampled for the analysis of these special compounds.

Table B-12
WELLS SAMPLED
FOR ANALYSES OF SPECIAL COMPOUNDS

08000076	01902536	11900038	08000070
01900027	08000060	01900029	01902537
01902115	01902117	01902425	01901525
01900831	01900881		

The analysis for special compounds indicates that these compounds do not occur at detectable levels in the 14 wells sampled except for Freon 113. Freon 113 has been detected in one well, 08000060, at 10 ppb. The analytical procedure used for perchlorate analysis was determined to be inappropriate. Nitrate levels above 1 ppm cause positive interference of the perchlorate analysis. Nitrate levels in the groundwater are generally above 1 ppm in the areas sampled, and range as high as 120 ppm. In addition, an evaluation of the analytical procedure by the CDHS Southern California Laboratory determined that the presence of other ions also interferes with the perchlorate analysis. Therefore, the results of the perchlorate analyses were rejected in the quality assurance review of the laboratory results.

Tables B-13 and B-14 summarize the results for volatile and semi-volatile analyses, including aniline and N-nitrosodimethylamine which have been reported to be used or disposed of in the area. Special Analytical Services have been requested for low detection limits of 1 ppb for the following compounds: toluene, 1,1,1-trichloroethane, trichloroethylene, perchloroethylene, carbon tetrachloride, aniline, and N-nitrosodimethylamine.

As shown in Table B-13, all of the compounds have been detected except for Toluene, Aniline and N-nitrosodimethylamine. Trichloroethylene is the most commonly occurring contaminant, which has been detected in 6 of the 14 wells sampled. The wells containing trichloroethylene occur in the southwestern one-third of the wells sampled as part of the source sampling activity (Figure B-1). In some of the wells containing trichloroethylene, 1,1,1-Trichloroethane, perchloroethylene, and carbon tetrachloride occur.

Table B-13
SUMMARY OF RESULTS OF ANALYSES FOR
THOSE CHEMICAL COMPOUNDS FOR WHICH SPECIAL
ANALYTICAL SERVICES WERE REQUESTED,
LOW LIMITS OF DETECTION

Well	Toluene	1,1,1-Trichloroethane	Trichloroethylene	Perchloroethylene	Carbon Tetrachloride	Aniline	N-nitrosodimethylamine
08000076	ND	ND	1	ND	ND	ND	ND
01902536	ND	ND	ND	ND	ND	ND	ND
11900038	ND	20	600	480	5	ND	ND
08000070	ND	ND	3.5	ND	ND	ND	ND
01900027	ND	ND	ND	ND	ND	ND	ND
08000060	ND	170	1100	500	ND	ND	ND
01900029	ND	ND	370	29	6	ND	ND
01902537	ND	ND	ND	ND	ND	ND	ND
01902115	ND	ND	ND	ND	ND	ND	ND
01902117	ND	ND	ND	ND	ND	ND	ND
01902425	ND	ND	ND	ND	ND	ND	ND
01901525	ND	ND	ND	ND	ND	ND	ND
01900831	ND	170	8	ND	ND	ND	ND
01900881	ND	ND	ND	ND	ND	ND	ND

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TABLE B-14
SUMMARY OF ADDITIONAL CHEMICAL CONSTITUENTS DETECTED IN THE WELLS SAMPLED AS PART OF THE SOURCE SAMPLING PROGRAM

Well	Compound	Concentration (ppb)
08000076	Di-N-Butylphthalate	10
01902536	Chloroform	1
11900038	1,1-Dichloroethylene	6.8
	Chloroform	5
	Di-N-Butylphthalate	10
	Trans-1,2-Dichloroethylene	5
08000070	Di-N-Butylphthalate	10
08000060	1,1-Dichloroethylene	96
	Acetone	100
	Chloroform	10
	Trans-1,2-Dichloroethylene	110
01900029	1,1-Dichloroethylene	1
	1,2-Dichloroethane	4
	Chloroform	25
01902537	Bis (2-Ethylhexyl) Phthalate	60
01902115	Bis (2-Ethylhexyl) Phthalate	60
01902425	Bis (2-Ethylhexyl) Phthalate	60
01900831	1,1-Dichloroethylene	25
01900027	Contaminants were not detected	
01901525	Contaminants were not detected	
01900881	Contaminants were not detected	
01902117	Contaminants were not detected	

Additional volatile and semi-volatile organic compounds detected in the water samples are summarized in Table B-14. Chloroform and 1,1-dichloroethylene are the most frequently occurring contaminants: each were detected in four of the wells sampled. Table B-15 summaries the number of occurrences of compounds identified in the samples and presents the value of the highest concentration reported. This table shows that a total of 11 volatile and semi-volatile compounds have been detected in the area of the source sampling. Volatile and semi-volatile compounds have not been detected in four wells, including 01900027, 01901525, 01900881 and 01902117.

Table B-15
SUMMARY OF CHEMICAL COMPOUNDS
DETECTED IN SOURCE SAMPLING

Compound	Number of Wells Exceeding Detection Limit	Highest Reported Concentration (ppb)
Volatiles		
1,2-Dichloroethane	1	4
1,1,1-Trichloroethane	3	170
1,1-Dichloroethylene	4	96
Trans-1,2-Dichloroethylene	2	110
Trichloroethylene	6	1100
Perchloroethylene	3	500
Carbon Tetrachloride	2	6
Chloroform	4	25
Acetone	1	100
Semi-Volatile		
Bis (2-Ethylhexyl) Phthalate	3	60
Di-N-Butylphthalate	3	10

Pesticides and herbicides were analyzed for in wells 01900027, 01900029, 01902115, 01902117, 01902425, 01901525, and 01900831.

These analyses have been conducted because of the use of organic pesticides and herbicides on crops which were grown historically in the source sampling area. The results of these analyses indicate no detectable levels of the compounds which were analyzed for, as given in Table B-8.

B.2.2.3 General Sampling

A total of 47 wells have been sampled during the general sampling in the San Gabriel Basin. These wells were selected for sampling to complement the AB 1803 sampling program and to provide a better understanding of the extent of contamination in the basin. The AB 1803 program provided analysis of more than 25 percent of the community services wells (wells with more than 200 service connections). Wells selected for the general sampling include privately owned wells and their selection has been based on location with respect to known or suspected occurrences of contamination (CH2M HILL, 1985a). The locations of wells sampled in the general sampling activity are shown in Figure B-1.

The basis for selecting the wells sampled in the general sampling activity is given in detail in CH2M HILL (1985a). In general, the basis for selection of the 47 wells can be summarized as follows:

- To provide an updated measure of the level of contamination in areas of known contamination

- To provide an analysis of other contaminants which may occur in the groundwater; most wells have not been checked for other contaminants besides TCE and PCE

- To evaluate the lateral extent of contamination in areas of known contamination

- To define the quality of groundwater upgradient of known areas of contamination

- To define the quality of groundwater downgradient of known areas of contamination and to obtain the water quality of wells which are potentially threatened

The water samples collected from the 47 wells have been analyzed for volatile and semi-volatile organic compounds. Of the wells sampled, contaminants have been detected in 28 wells, volatiles have been detected in 25 wells and semi-volatiles have been detected in 7 wells. A total of 10 different compounds have been detected: 8 volatiles and 2 semi-volatile compounds. Contaminants have not been detected in 17 of the wells sampled. Table B-16 lists the compounds which have been detected, the number of wells in which the compounds were detected and the highest concentration reported for the particular compounds detected for each well.

TCE and PCE are the most commonly occurring volatile organic compounds; whereas phenols are the most commonly occurring semi-volatile organic compounds. The highest TCE concentration of 130 ppb occurs in well 01900035 and the highest PCE concentration of 134 ppb occurs in well 01902951. The highest concentration of phenols is 10 ppb, which occurs in 6 wells. The frequency of occurrence and levels of contamination for other contaminants are given in Tables B-16 and B-17.

B.2.2.4 Sampling and Field Activities

A sampling plan for the Supplemental Sampling Program identifying the wells to be sampled and analyses to be conducted on the water samples was prepared and submitted on March 12, 1985. This plan proposed that 53 wells be sampled in fulfillment of the objectives of the San Gabriel

Table B-16
SUMMARY OF CHEMICAL
COMPOUNDS DETECTED IN GENERAL SAMPLING

Compound	Number of Wells Exceeding Detection Limit	Highest Reported Concentration (ppb)
Volatiles		
Perchloroethylene	12	134
Trichloroethylene	16	130
1,1-Dichloroethylene	2	1.3
1,2-Dichloroethane	1	8
Carbon Tetrachloride	4	7.6
Chloroform	4	4.5
Trans-1,2-Dichloroethylene	1	4.1
1,1,1-Trichloroethane	2	17
Semi-Volatiles		
Bis (2-Ethylhexyl) Phthalate	1	2
Phenol	6	10

Supplemental Sampling Program. All of the wells proposed in that sampling plan were sampled with the exception of 19 wells. Substitute wells were selected for most of these wells to acquire the information intended by the selection of the original well. Table B-18 lists the wells originally selected, the substitute well and the reason why the original wells could not be sampled. In some cases, substitute wells could not be found due to the lack of wells or inability to sample wells in the vicinity. In these cases, alternate wells were selected to provide additional water quality data in areas where data are sparse or lacking. These alternate wells and reasons for sampling are identified in Table B-19. Criteria given in CH2M HILL (1985a) were followed in selecting the alternate and substitute well locations.

Table B-17
RESULTS OF CHEMICAL ANALYSIS OF WELLS
SAMPLED FOR GENERAL SAMPLING

Well	Compound	Concentration (ppb)
01900001	Perchloroethylene*	1.4
	Phenols	3
	Trichloroethylene	5
01900012	Trichloroethylene	9
01900016	ND	
01900035	1,1-Dichloroethylene	1.3
	1,2-Dichloroethane	8
	Carbon Tetrachloride	7.6
	Chloroform	4.5
	Perchloroethylene	4.8
	Trans-1,2-Dichloroethylene	4.1
	Trichloroethylene	130
01900042	ND	
01900091	1,1,1-Trichloroethane	17
	Bis (2-Ethylhexyl) Phthalate	2
01900106	Trichloroethylene	1
01900331	Perchloroethylene	24
	Trichloroethylene	5
01900354	Trichloroethylene	1
01900885	Carbon Tetrachloride	1
	Perchloroethylene	1.9
	Trichloroethylene	6
01900918	Carbon Tetrachloride	1
01900920	Phenols	3
01900934	ND	
01900935	Phenols	2
01901411	ND	
01901492	Perchloroethylene	1
	Phenols	10
01901606	ND	

Table B-17 (Continued)

Well	Compound	Concentration (ppb)
01901616	ND	
01901699	Trichloroethylene	1
01901745	ND	
01902030	Chloroform	1
	Perchloroethylene	1
01902032	Chloroform	1
	Trichloroethylene	6.6
01902169	Perchloroethlyene	6
	Trichloroethylene	1
01902241	ND	
01902270	Perchloroethylene	10
01902356	ND	
01902519	ND	
01902589	ND	
01902663	Trichlorethylene	1
01902806	Perchloroethylene	8.3
01902816	ND	
01902859	Perchloroethylene	3.5
	Phenols	10
01902920	Trichloroethylene	1
01902951	Perchloroethylene	134
	Trichloroethylene	11
01902967	Carbon Tetrachloride	1
01903006	Trichloroethylene	1
01903062	ND	
01903084	ND	
01903088	Trichloroethylene	1

Table B-17 (Continued)

Well	Compound	Concentration (ppb)
08000012	Chloroform	1
08000046	ND	
08000047	ND	
08000049	1,1,1-Trichloroethane	7.5
	1,1-Dichloroethylene	1
	Perchloroethylene	33
	Trichloroethylene	7.1
08000067	Phenols	10
08000077	ND	
41901605	ND	
A8000067	ND	

ND None Detected
* Same as Tetrachloroethylene

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Table B-18
SUMMARY OF SUBSTITUTE WELLS SELECTED FOR SUPPLEMENTAL SAMPLING PROGRAM

Well	Substitute	Reason For Not Sampling
01902924	01901411	Owner of well unavailable
01902098	08000049	Abandoned
01902496	01902589	Ownership transferred
01900043	01902806	Pump is broken
01902532	01900106	Ownership transferred
01900961	01903006	No pump
08000034	01903088	Well doesn't exist
01902968	01902816	Well is destroyed
01903012	01902967	Ownership transferred
08000005	01902030	Abandoned
01903067	08000077	Previously sampled by Stetson Engineers
01901685	01902270	No pump
01902531	01903084	Well 01903084 was pumping whereas 01902531 was not pumping
01900332	01900331	Pump is broken
01900095	none	Previously sampled by the California Department of Health Services (CDHS)
08000028	none	Owner could not be contacted
01900094	none	Previously sampled by CDHS
01900117	01900881	Well has been out of service for 5 years
08000075	08000076	Pump wouldn't work

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Table B-19
ALTERNATE WELLS SELECTED
FOR SUPPLEMENTAL SAMPLING PROGRAM

Alternate Well	Reason For Sampling
01900091	Obtain water quality in northeastern part of basin
01900918	Located west of plume area #1[a]
01900920	Located west of plume area #1[a]
01900934	Located north of plume area #3[a]
01900935	Located northeast of plume area #3[a]
08000012	Located west of plume area #1[a]

[a] - plume area refers to areas outlined in CH2M HILL (1985a) (see also Volume I, Figure 3-1)

Collection, packaging and shipping of samples was performed in accordance with the procedures described in CH2M HILL (1985a). Deviations from these procedures was necessary in some instances due to actual field conditions. The well discharge was not always known; therefore, the total evacuation quantities for certain wells could not be determined. The most difficult part of the sampling procedure to comply with, was to reduce the flow rate for the collection of a water sample. In many cases, the flow rate could not be controlled which resulted in entrainment of air in the discharge.

Table B-20 summaries information collected in the field including pH, conductivity and temperature. In addition, comments noted in the field are provided to give an indication of the quality of the sample.

Blank and duplicate samples were collected for 19 wells. Table B-21 shows the results of this sampling. In general, the analytical results appear to indicate that the

Table B-20
SUMMARY OF FIELD DATA COLLECTION ACTIVITIES

Well No.	Sample Date	Discharge gpm (Approx.)	Field Measurement		Temp °C	Comments
			Last pH	Conductivity micromhos		
31900001	05/08/85	Unknown	7.16	1225	19	- Good sample
01900012	05/08/85	780	7.61	710	22	- Well running continuously for 4 hours - Very high degree of aeration of the sample due to cascading water - Poor quality sample due to aeration
01900016	05/08/85	1557	7.91	400	22	- Well running continuously for 5 days - Good quality sample
01900027	02/12/85	1200	*	*	*	- Large amount of air entrainment - Poor quality sample
01900029	02/12/85	1300-1700	*	*	*	- Large amount of air entrainment - Poor quality sample
01900031	02/12/85	1700	*	*	*	- Some air entrainment - Fair quality sample
01900035	04/17/85	300-500	7.05	580	21.5	- Some air entrainment - Fair quality sample
01900042	05/08/85	650	7.58	700	20	- Good quality sample
01900091	05/13/85	100	6.31	985	20	- Pump & surrounding area was oily - Fair quality sample

Table B-20
(Continued)

Well No.	Sample Date	Discharge gpm (Approx.)	Field Measurement Last pH	Field Measurement Conductivity micromhos	Temp °C	Comments
01900106	04/25/85	Unknown	7.48	355	17	- Good quality sample
01900331	05/14/85	265	7.01	1000	19	- Good quality sample
01900337	03/19/85	600	7.66	1275	21.5	
01900354	04/30/85	2550	7.45	405	15	- Good quality sample
01900831	03/14/85	1200-1400	8.09	850	19.7	
01900881	04/17/85	2200	7.25	950	19	
01900885	04/30/85	2025	7.63	610	20	- Good quality sample
01900918	05/01/85	600	7.74	445	19	- Good quality sample
01900920	05/14/85	100	7.23	400	19	- Some intermittent air entrainment - Fair quality sample
01900934	05/14/85	Unknown	7.11	630	20	- Good quality sample
01900935	05/14/85	1945	7.13	430	20	- Good quality sample
01901411	04/30/85	Unknown	7.54	475	17	- Good quality sample
01901492	04/24/85	1875	7.03	455	*	- Good quality sample
01901525	03/14/85	450	7.75	1160	19.1	- Low to moderate air entrainment
01901526	03/14/85	525	7.54	720	17.2	

Table B-20
(Continued)

Well No.	Sample Date	Discharge gpm (Approx.)	Field Measurement Last pH	Field Measurement Conductivity micromhos	Temp °C	Comments
01901596	03/19/85	540	7.51	1725	21	
41901605	05/07/85	410	7.33	800	22	- Pump running continuously - Air entrainment in discharge - Fair quality sample
01901606	05/07/85	1300	7.54	750	21	- Pump running continuously - Air entrainment in discharge - Fair quality sample
01901616	05/07/85	430	7.18	1210	20	- Pump running continuously - Air entrainment in discharge - Fair quality discharge
01901686	03/14/85	575	7.03	850	18.3	
01901699	04/18/85	2200	6.68	350	16	- Good quality sample
01902030	05/01/85	700	7.35	690	18	- Some air entrainment in discharge - Good quality sample
01902032	04/18/85	188	7.44	725	19	- Good quality sample
01902115	03/07/85	2500	7.04	570	17.9	- Well has been shut off for 3 months
01902117	03/14/85	4500	6.78	975	18.9	- Air entrainment is visible
01902169	04/30/85	400	7.53	495	17	- Gasoline fumes evident - Good quality sample

Table B-20
(Continued)

Well No.	Sample Date	Discharge gpm (Approx.)	Field Measurement		Temp °C	Comments
			Last pH	Conductivity micromhos		
01902241	04/25/85	Unknown	7.44	400	17	- Moderate degree of air entrainment in discharge - Fair quality sample
01902270	05/02/85	448	7.14	865	19	- Vertically oriented discharge - Fair quality sample
01902356	04/17/85	1650	7.30	400	14	- Well running continuously for 3 weeks
01902425	03/07/85	740	7.08	690	20.4	
01902519	05/07/85	550	7.17	600	20	- Well running continuously - Air entrainment in discharge - Fair quality sample
01902536	04/16/85	2000	NR	975	20	
01902537	03/07/85	Unknown	6.14	720	18.3	
01902589	04/30/85	Unknown	7.73	410	20	- Air entrainment in discharge - Fair quality sample
01902663	04/23/85	590	*	*	*	- Fair quality sample
01902806	04/25/85	400-500	7.06	570	22	- Good quality sample
01902816	05/01/85	335-410	7.41	365	18	- Good quality sample - Pump operates on an intermittent basis
31902819	03/19/85	450	7.12	1880	21	- Well not used since 1978

Table B-20
(Continued)

Well No.	Sample Date	Discharge gpm (Approx.)	Field Measurement Last pH	Field Measurement Conductivity micromhos	Temp °C	Comments
31902820	03/19/85	100	7.15	1825	21	- Well not used since 1978 - Suspended solids in samples
01902859	05/02/85	900	7.30	955	19	- Some air entrainment in discharge - Good quality sample
01902920	04/24/85	2800	7.18	460	17	- Good quality sample
01902951	05/09/85	273	7.42	855	18	- Good quality sample
01902967	05/01/85	3100	7.39	555	16	- Good quality sample
01903006	04/24/85	Unknown	6.87	605	NR	- Good quality sample
01903062	04/25/85	Unknown	7.24	325	18	- Good quality sample
01903067	03/19/85	540	7.64	930	20	
01903084	05/09/85	800	7.53	700	22	- Good quality sample
01903088	04/24/85	1000	7.14	425	18	- Good quality sample
08000012	04/18/85	450	7.59	400	19	
08000039	02/12/85	790	*	*	*	- Air entrainment in sample
01901745	05/13/85	Unknown	7.96	480	17.5	- Some aeration of sample discharge - Good quality sample
08000046	04/23/85	169	7.26	417	21	- High pressure discharge - Fair sample quality

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Table B-20
(Continued)

Well No.	Sample Date	Discharge gpm (Approx.)	Field Measurement Last pH	Field Measurement Conductivity micromhos	Temp °C	Comments
08000047	04/23/85	Unknown	7.30	375	17	- Sample taken from a leaking valve - Fair quality sample
08000049	04/23/85	Unknown	7.02	1090	18	- Good quality sample
08000060	04/23/85	1400	7.73	610	*	- Good quality sample
08000067	05/02/85	2000	7.18	375	21	- Good quality sample
08000070	04/16/85	2200	7.17	525	18	
08000076	04/16/85	Unknown	*	475	18	
08000077	05/07/85	2600	7.01	665	22	- Pump had been running continuously - Air entrainment in discharge - Fair quality sample
11900038	04/16/85	Unknown	6.20	680	19	
A8000067	05/09/85	Unknown	8.21	400	15	- Good quality sample

*Not reported because well has been pumping continuously or field equipment malfunctioned
NR--Not recorded

LAT3/012

Table B-21
LABORATORY RESULTS FOR DUPLICATE AND BLANK SAMPLES

Well	Compound	Primary (ppb)	Duplicate (ppb)	Associated Blank (ppb)
01900027	ND	--	--	--
01902115	Bis (2-Ethylhexyl) Phthalate	60	<5	<5
01901525	ND	--	--	--
01903067	Methylene Chloride	1*	<5	2*
	Bis (2-ethylhexyl) Phthalate	34	R	<5
08000076	Di-N-Butylphthalate	10	<10	<10
	Trichloroethylene	<1	1	<1
01900881	ND			
08000012	Acetone	10	10	10
	Phenol	<10	<10	10
	Chloroform	<1	1	<1
	Diethylphthalate	<10	10	10
08000060	1,1-Dichloroethylene	96	87	<1
	Chloroform	5	10	<1
	1,1,1-Trichloroethane	170	150	<1
	Trichloroethylene	1100	1100	<1
	Perchloroethylene	500	410	1
08000060	Phenol	R	<20	10
	Trans-1,2-Dichloroethylene	110	90	<1
	Freon 113	5	10	<1
	Acetone	<50*	100*	<10

Table B-21
(Continued)

Well	Compound	Primary (ppb)	Duplicate (ppb)	Associated Blank (ppb)
01903088	Acetone	10	<10	10
	Trichloroethylene	1	<1	1
01902806	Trichloroethylene	1	1	1
	Perchloroethylene	7.4	8.3	<1
	Phenol	10	10	<10
	Bis (2-Ethylhexyl) Phthalate	<10	<10	10
01902589	Methylene Chloride	1	1	2.3
	Chloroform	<1	<1	1
	Phenol	<10	<10	20
	Di-N-Butylphthalate	10*	10*	20
01902030	Chloroform	1	1	<1
	Trichloroethylene	2.9	2.6	1
	Perchloroethylene	1	<1	<1
	Phenol	<10	10	17
	Di-N-Butylphthalate	10	10	10
01902859	Methylene Chloride	1	1	1.9
	Chloroform	1	1	1
	Trichloroethylene	3.3	3.2	1
	Perchloroethylene	3.5	3.3	<1
	Phenol	10	<10	<10
	Di-N-Butylphthalate	10	10	10
08000077	Phenol	<10	<10	25
01900012	Trichloroethylene	9	10	<1

Table B-21
(Continued)

Well	Compound	Primary (ppb)	Duplicate (ppb)	Associated Blank (ppb)
01902951	Trichloroethylene	11	11	<1
	Perchloroethylene	134	128	<1
01901745	ND			
01900920	Phenol	3	3	<10

* - Considered useable for limited purposes
R - Analysis rejected by laboratory
Q - No analytical result given by laboratory
ND - None detected

LASG3/024

concentrations reported in the primary samples are reproduced in the duplicate samples within, 1) the accuracy expected for the given field conditions under which the samples have been collected and 2) the precision of the laboratory analytical methods.

The analysis of the field blank samples indicates the occurrence of contamination in many of the blanks. Table B-22 identifies the contaminants detected in the blank samples and the reported concentrations. Wells sampled and submitted to the laboratory at the same time as the sample blank are also listed in Table B-22. In most cases, the contaminants detected in the sample blanks have also been detected in the water samples collected from wells. For those contaminants detected in the well water samples and also detected in the sample blanks, the contaminants in the well water samples are assumed to be due to sample contamination unless the contaminant concentration is at least 5 times higher than the concentration reported for the sample blanks. This criteria is in accordance with established guidelines for evaluating organic analyses (EPA, 1985). Results reported for analysis of compounds in water samples collected for the SSP have been reviewed to remove those chemical constituents which are believed to be related to sample contamination. The sample analysis results suspected to be due to sample contamination have not been used in analyses described in this SSP report.

B.3 COMPILATION OF AVAILABLE DATA

Prior to the San Gabriel Supplemental Sampling Program, groundwater samples have been collected and analyzed for volatile organic compounds, particularly trichloroethylene, perchloroethylene and carbon tetrachloride. The principal collectors of this information have included individual water purveyors, Stetson Engineers for the Upper San Gabriel Valley

Table B-22
SUMMARY OF CONTAMINATION FOUND IN BLANK SAMPLES

Wells Associated With Blank	Compounds Detected In Blank Sample	Concentration (ppb)*
08000049	Bis (2-Ethyhexyl) Phthalate	10
01902806	Chloroform	1
01902241	Phenol	54
01900106	Trichloroethylene	1
01903062		
08000047	Phenol	10
08000046	Trichloroethylene	1
08000060		
01902663		
01903088	Acetone	10
01902920	Phenol	10
01901492		
01903006		
01900881	Acetone	12
01902356		
01900035		
08000012	Acetone	10
01902032	Diethylphthalate	10
01901699	Phenol	10
01900001	Acetone	21
01900012		
01900042		
01900016		
01903084	Phenol	13
01902951		
A8000067		
08000077	Phenol	25
01902519		
01901616		
01901606		
01903067	Methylene Chloride	2
01900337		
01901596		
31902819		
31902820		

*Parts per billion

Table B-22 (Continued)

Wells Associated With Blank	Compounds Detected In Blank Sample	Concentration (ppb)*
01902589	Acetone	10
01902169	Chloroform	1
01900885	Di-N-Buthylphthalate	20
01901411	Nethylene Chloride	2.3
01900354	Phenol	20
01902859	Acetone	24
08000067	Chloroform	1
01902270	Di-N-Buthlphthalate	10
	Methylene Chrloride	1.9
	Trichloroethylene	1
01902030	Acetone	10
01900918	Di-N-Butylphthalate	10
01902967	Methylene Chloride	1
01902816	Phenol	17
	Trichloroethylene	1

* Parts per billion

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Municipal Water District and San Gabriel Valley Municipal Water District, and the California Department of Health Services (CDHS). The California Regional Water Quality Control Board, Los Angeles Section, has collected a limited number of samples. The CDHS Sanitation Branch maintains the available data on file in their Los Angeles office. These records date back to 1979. The available data have been obtained and combined with the data collected during the AB 1803 and the SSP into a computerized data base system known as TDM II (CH2M HILL, 1985b).

The TDM II data base contains the water quality data and related well data collected at part of the SSP. These data are comprised of three principal sets. The first data set is a cross-reference list. This list cross references the various designations which have been assigned to the wells entered into the data base. The second data set contains information pertaining to the location and completion characteristics of the wells. The third set is the water quality data base for each well. A more detailed explanation and printout of these data sets are provided below.

B.3.1 WELL CROSS-REFERENCE DATA SET

Wells in the San Gabriel Basin have several different designations: 1) the owner of a well typically gives a designation to a well, particularly where more than one well is owned; 2) the California Department of Water Resources (CDWR) gives a state well number to each well that they maintain in their files, the state well number is related to its geographic location as explained in Figure B-2; 3) the former Los Angeles County Flood Control District has also developed a well designation number for wells maintained in their files; and 4) a state recordation number is assigned to all producing wells in the basin.

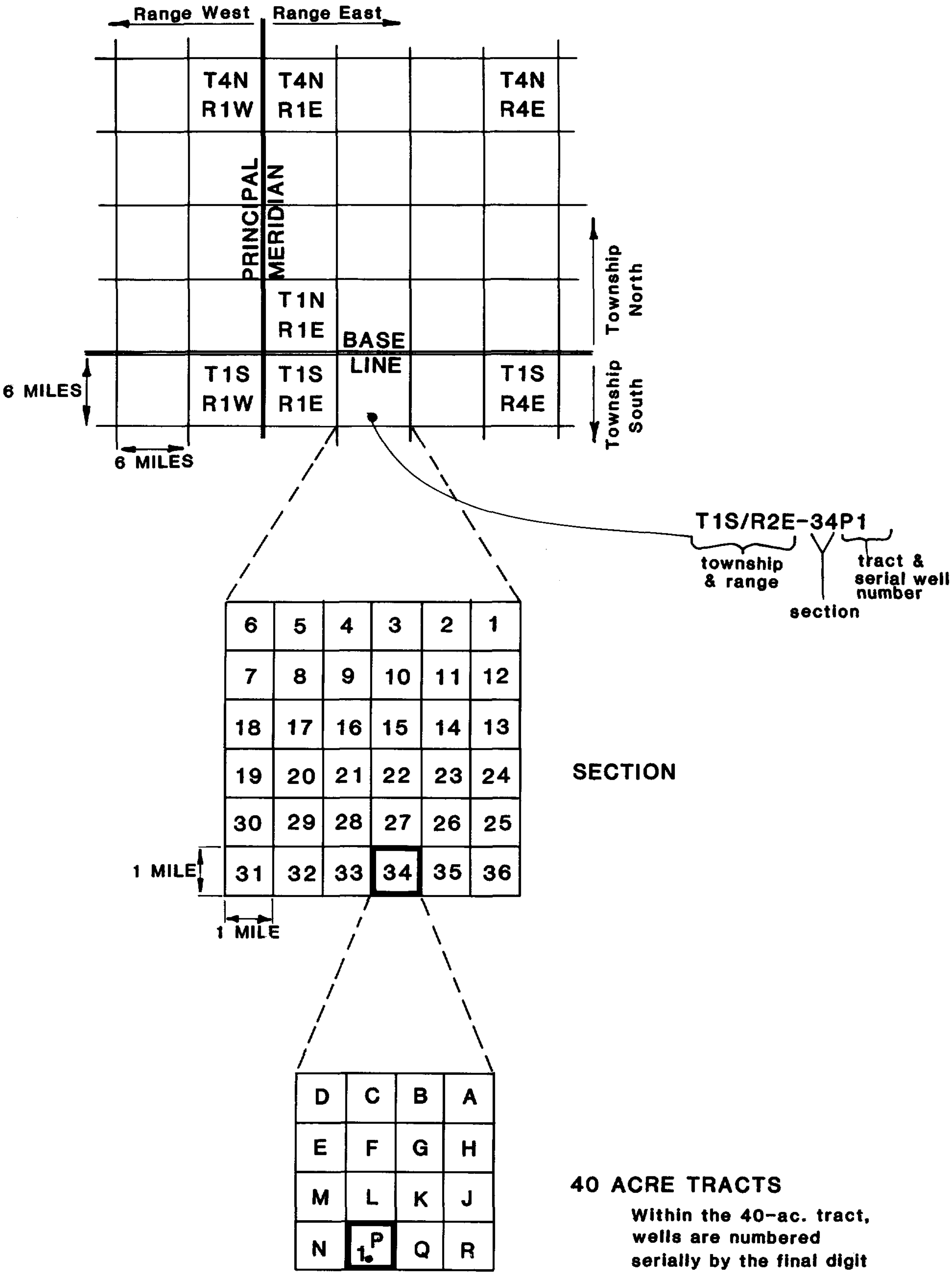

FIGURE B-2
EXPLANATION OF THE STATE (CDWR) WELL NUMBERING SYSTEM
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGRAM

Unfortunately, there is no one designation based on a consistent numbering scheme which has been used to identify all of the wells entered into the computerized data base. Therefore, an eight digit TDM II number has been assigned to each well entered into the data base. The state recordation number appeared to be assigned to most of the wells throughout the basin, so the recordation number is the root of most of the TDM II well numbers. The use of the well recordation number, where available, as the root of the TDM II well number minimizes the development of a completely new well designation system.

Table B-23 is a printout of the cross-reference list of wells for the San Gabriel Basin. This list is printed out by TDM II number to allow its use in cross referencing the wells used throughout the SSP report. The columns in this listing include Producer's Name, TDM II Well Code, Actual Recordation Number, State Well Number, Owner's Number, and Los Angeles County Flood Control District Number. The primary source of information for preparing this cross-reference list includes the LACFCD (1984) and annual reports of the Main San Gabriel Basin Watermaster.

B.3.2 WELL LOCATION AND COMPLETION DATA

The second data set in the computerized data base includes information on the location of the well and basic completion details. This information has not been readily available in published materials and in some cases this information is unknown by the owners due to the lack of historical records; therefore, this data set is incomplete.

Wells have been located with respect to the Universal Transverse Mercator (UTM) coordinate system. This system is widely used by other national data base systems which will allow the well information to be loaded into federal data

XREF
SAN GABRIEL WELL CROSS REFERENCE LISTING
TABULATION OF WELLS IN THE MAIN SAN GABRIEL BASIN
LISTED BY ACTUAL WELL RECORDATION NUMBER

CROSS REFERENCE REPORT
86.03.05

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
Texaco Inc.	01900001	1900001	2S/10W-05C02	14	
Alhambra, City of	01900010	1900010	1S/12W-11N02	8	2880C
Alhambra, City of	01900011	1900011	1S/12W-10A01	9	4079
Alhambra, City of	01900012	1900012	1S/12W-14D01	10	2881A
Alhambra, City of	01900013	1900013	1S/12W-10R01	12	2880D
Alhambra, City of	01900014	1900014	1S/12W-14G01	13	2891C
Alhambra, City of	01900015	1900015	1S/12W-14F02	14	
Alhambra, City of	01900016	1900016	1S/12W-23D01	15	
Alhambra, City of	01900017	1900017	1S/12W-01E02	LON #2	4108E
Alhambra, City of	01900018	1900018	1S/12W-10E01	GARFIELD	4069
Sunny Slope Water Company	01900026	1900026	1S/11W-06D01	8	4117
Valley County Water District	01900027	1900027	1S/10W-07A06	1	4239E
Valley County Water District	01900028	1900028	1S/10W-07A06	2 (NORTH MAIN EAST)	4239F
Valley County Water District	01900029	1900029	1S/10W-04R02	3 (MORADA)	
Valley County Water District	01900031	1900031	1S/10W-19C01	5 PADDY LANE	3032C
Valley County Water District	01900032	1900032	1S/10W-07A02	6	4239
Valley County Water District	01900034	1900034	1S/10W-08A02	8	4259A
Valley County Water District	01900035	1900035	1S/10W-17N01	9	3042F
Maple Water Company	01900042	1900042	1S/10W-33D	W-2	3055M2
Owl Rock Products Company	01900043	1900043	1S/11W-02J		
Rose Hills Memorial Park Association	01900052	1900052	2S/11W-05	3	
Dunning, George	01900091	1900091	1S/9W-04	1910	
California Domestic Water Company	01900092	1900092	1S/11W-22		
Burbank Development Company	01900093	1900093	1N/10W-29D	BURB	
Rose Hills Memorial Park Association	01900094	1900094	2S/11W-08G01	1	2948G
Sully-Miller Contracting Company	01900106	1900106	1S/11W-01H	IRWINDALE-1 (BLU DIAMOND)	
Manning Brothers	01900117	1900117	1S/10W-09H	36230	4279B
Rurban Homes Mutual Water Company	01900120	1900120	1S/11W-14C01	1 NORTH	2990M
Rurban Homes Mutual Water Company	01900121	1900121	1S/11W-14C02	2 SOUTH	2990N
Rincon Irrigation Company	01900132	1900132	2S/11W-04N02	1	
Del Rio Mutual Water Company	01900331	1900331	1S/11W-34	BURKE	
Del Rio Mutual Water Company	01900332	1900332	1S/11W-34	LINGMAN	
Southwest Suburban Water Systems	01900337	1900337	1S/10W-31G03	152W1	
Southern California Edison Company	01900343	1900343	1S/12W-24J01	2EB76	
California American Water Company Duarte System	01900354	1900354	1N/10W-31A01	SANTE FE	4246
California American Water Company Duarte System	01900355	1900355	1N/10W-31M01	B-V	4227A
California American Water Company Duarte System	01900356	1900356	1N/11W-36L01	MT. AVE	4217
California American Water Company Duarte System	01900357	1900357	1N/10W-29K01	LOS LOMAS	4255E
California American Water Company Duarte System	01900358	1900358	1N/10W-22M01	FISH CYN	4274
Valley View Mutual Water Company	01900363	1900363	1S/11W-12J04	1	

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
Valley View Mutual Water Company	01900364	1900364	1S/11W-12J05	2	
Valley View Mutual Water Company	01900365	1900365	1S/11W-12J03	3	3020E
Covell, et al.	01900390	1900390	1N/10W-23		
Doyle & Madruga	01900415	1900415	1N/11W-24		
Monrovia, City of	01900417	1900417	1S/11W-02G02	1	4198E
Monrovia, City of	01900418	1900418	1S/11W-02G01	2	4198
Monrovia, City of	01900419	1900419	1S/11W-02B01	3	4198K
Monrovia, City of	01900420	1900420	1S/11W-02H01	4	4208A
Monrovia, City of	01900425	1900425	1N/11W-13	DIV	
Monterey Park, City of	01900453	1900453	1S/12W-25B01	1	2913
Monterey Park, City of	01900454	1900454	1S/12W-25B02	2	2913A
Monterey Park, City of	01900455	1900455	1S/12W-25B07	3	2913L
Monterey Park, City of	01900456	1900456	1S/12W-25B08	4	2914J
Monterey Park, City of	01900457	1900457	1S/12W-25G05	5	2914S
Monterey Park, City of	01900458	1900458	1S/12W-25G03	6	2914N
Southern California Water Company - San Gabriel	01900510	1900510	1S/12W-25B10	1SG	2914M
Southern California Water Company - San Gabriel	01900511	1900511	1S/12W-25B11	2SG	
Southern California Water Company - San Gabriel	01900512	1900512	1S/12W-25B05	2 GAR	2913H
Southern California Water Company - San Gabriel	01900513	1900513	1S/12W-25B03	1 GAR	2913B
Southern California Water Company - San Gabriel	01900514	1900514	1S/12W-24E04	SAXTON 3	2902E
Southern California Water Company - San Gabriel	01900515	1900515	1S/12W-24E	SAXTON 1	
San Gabriel Country Club	01900547	1900547	1S/12W-01M01	1	4068B
Metropolitan Water District	01900693	1900693	1N/9W-35	2	
Metropolitan Water District	01900694	1900694	1N/9W-35	3	
San Gabriel Valley Water Company	01900725	1900725	1S/11W-19M01	G4A	2913K
San Gabriel Valley Water Company	01900733	1900733	1S/11W-28M03	5A	2954N
Amarillo Mutual Water Company	01900791	1900791	1S/11W-19E04	1	
Amarillo Mutual Water Company	01900792	1900792	1S/11W-19E03	2	
Glendora, City of	01900826	1900826	1N/9W-29M01	11E	4345
Glendora, City of	01900827	1900827	1N/10W-27	12G	
Glendora, City of	01900828	1900828	1N/9W-29E01	10E	4345A
Glendora, City of	01900829	1900829	1N/10W-27	8E	4285
Glendora, City of	01900830	1900830	1N/10W-27	9E	
Glendora, City of	01900831	1900831	1S/10W-03C03	7G	4288C
Covina Irrigating Company	01900881	1900881	1S/10W-03K02	CONTRACT	4288A
Covina Irrigating Company	01900882	1900882	1S/10W-17A03	BAL #3	
Covina Irrigating Company	01900883	1900883	1S/10W-17A02	BAL #2	3051A
Covina Irrigating Company	01900885	1900885	1S/10W-17A01	BAL #1	3051
Champion Mutual Water Company	01900908	1900908	1S/11W-14F	1	
California Water Company-San Marino System	01900918	1900918	1S/11W-18K01	GUESS	2921

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
California Water Company-San Marino System	01900920	1900920	1S/11W-08E02	1954 (MISSION VIEW)	4139B
California Water Company-San Marino System	01900921	1900921	1S/12W-13A01	RIC-1	2910
California Water Company-San Marino System	01900923	1900923	1S/11W-19F01	1907 (IVAR #1)	2922
California Water System-San Marino System	01900924	1900924	1S/11W-08J01	MARIPOSA-1	2940D
California Water Company-San Marino System	01900925	1900925	1S/11W-08J02	MARIPOSA-2	
California Water Company-San Marino System	01900926	1900926	1S/11W-07N02	1948	2920B
California Water Company-San Marino System	01900927	1900927	1S/11W-07N01	1957 (GRAND)	2920A
California Water Company-San Marino System	01900934	1900934	1S/12W-03K01	1947 (ROANOKE)	407B
California Water Company-San Marino System	01900935	1900935	1S/12W-02H01	1925 (LONGDEN)	409B
Livingston-Graham, Inc.	01900961	1900961	1N/11W-36R	1 DUARTE	
Livingston-Graham, Inc.	01900963	1900963	1N/10W-32J02	1 KIN	4257A
Arcadia, City of	01901013	1901013	1S/11W-02F01	LON #1	4198A
Arcadia, City of	01901014	1901014	1S/11W-02F02	2 LON	4198B
Arcadia, City of	01901015	1901015	1N/11W-32Q02		4147A
Namimatsu Farms, Inc.	01901034	1901034	1S/9W-02		
Clayton Manufacturing Company	01901055	1901055	1S/11W-17E	2	
Hemlock Mutual Water Company	01901178	1901178	1S/11W-11	NORTH	
California Domestic Water Company	01901181	1901181	1S/11W-23P07	2	
California Domestic Water Company	01901182	1901182	1S/11W-26D07	1E	
California Domestic Water Company	01901183	1901183	1S/11W-23P08	5	
California Domestic Water Company	01901185	1901185	1S/11W-23	13N	
Sloan Ranches	01901198	1901198	1N/8W-30		
Fruit Street Water Company	01901199	1901199	1S/08W-06		
Base Line Water Company	01901200	1901200	1S/9W-01F01	1	4000A
Base Line Water Company	01901201	1901201	1S/9W-01	2	
Base Line Water Company	01901202	1901202	1S/9W-01	3	
Valley County Water District	01901307	1901307	1S/10W-18F01		3021A
Cedar Avenue Mutual Water Company	01901411	1901411	1S/11W-15L01	1	
Southwest Suburban Water Company	01901429	1901429	2S/11W-05J04	SWS	
Southwest Suburban Water Systems	01901430	1901430	2S/11W-05J	201W2	
Southwest Suburban Water Systems	01901432	1901432	2S/11W-05J	201W5	
Southwest Suburban Water Systems	01901433	1901433	2S/11W-05	201W4	
Southwest Suburban Water Systems	01901434	1901434	2S/11W-05	201W6	
California Water Company-San Marino System	01901441	1901441	1S/11W-20B02	BR-1	
La Puente Valley County Water District	01901460	1901460	1S/10W-19K01	2	3033B
Livingston-Graham, Inc.	01901492	1901492	1S/11W-12C02	1 EL	
Livingston-Graham, Inc.	01901493	1901493	1S/11W-12C01	3 EL	4219B
Richwood Mutual Water Company	01901521	1901521	1S/11W-15Q03	1 SOUTH	2982J
Richwood Mutual Water Company	01901522	1901522	1S/11W-15Q01	2 NORTH	
Glendora, City of	01901523	1901523	1N/9W-29C02	1E	4355

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
Glendora, City of	01901524	1901524	1S/10W-10C	4E	4289A
Glendora, City of	01901525	1901525	1S/10W-10C	3G	4289
Glendora, City of	01901526	1901526	1N/9W-29C01	2E	4355A
Southwest Suburban Water Systems	01901596	1901596	1S/10W-31G04	147W1	3035M
Southwest Suburban Water Systems	01901597	1901597	1S/10W-20R01	142W1	3053G
Southwest Suburban Water Systems	01901598	1901598	1S/10W-20B05	139W1	3052D
Southwest Suburban Water Systems	01901599	1901599	1S/10W-20B	139W2	3052E
Southwest Suburban Water Systems	01901600	1901600	1S/10W-20B	139W3	
Southwest Suburban Water Systems	01901602	1901602	1S/10W-30G	140W1	
Southwest Suburban Water Systems	01901604	1901604	1S/10W-23M	14B	
Southwet Suburban Water Systems	01901606	1901606	1S/10W-28K	102 (W2)	
Southwest Suburban Water Systees	01901608	1901608	1S/10W-32B01	105W1	3055P
Southwest Suburban Water Systems	01901609	1901609	1S/10W-22P	106W1	
Southwest Suburban Water Systems	01901610	1901610	1S/10W-20G01	111W1	
Southwest Suburban Water Systems	01901611	1901611	1S/10W-20R	112W1	
Southwest Suburban Water Systems	01901612	1901612	1S/10W-29M	113W1	
Southwest Suburban Water Systems	01901613	1901613	1S/10W-22G01	114W1	3082
Southwest Suburban Water Systems	01901615	1901615	1S/10W-28N	120W1	
Southwest Suburban Water Systems	01901616	1901616	1S/10W-33E	122W1	3065C
Southwest Suburban Water Systems	01901617	1901617	2S/10W-07R	123W1	
Southwest Suburban Water Systems	01901618	1901618	1S/10W-28K	124W1	3064
Southwest Suburban Water Systems	01901619	1901619	1S/10W-23K01	125W1	3103
Southwest Suburban Water Systems	01901620	1901620	1S/10W-23K02	126W1	3103A
Southwest Suburban Water Systems	01901621	1901621	2S/10W-08L01	131W1	3049B
Southwest Suburban Water Systems	01901622	1901622	1S/10W-23M	133	
Southwest Suburban Water Systems	01901623	1901623	1S/10W-31A03	134W1	3035S
Southwest Suburban Water Systems	01901624	1901624	1S/10W-27C02	135W1	3083A
Southwest Suburban Water Systems	01901625	1901625	2S/10W-08K01	136W1	3059A
Southwest Suburban Water Systems	01901627	1901627	1S/11W-26D02	202W1	2993A
San Gabriel County Water District	01901669	1901669	1S/12W-13B01	5 BRA	2910A
San Gabriel County Water District	01901670	1901670	1S/12W-13B02	6 BRA	2910C
San Gabriel County Water District	01901671	1901671	1S/12W-02H02	7	4098B
San Gabriel County Water District	01901672	1901672	1S/12W-11D01	8	4089
South Pasadena, City of	01901679	1901679	1S/12W-03M01	GRAVES 3	4068B
South Pasadena, City of	01901681	1901681	1S/12W-02Q01	2 WIL	4099
South Pasadena, City of	01901682	1901682	1S/12W-02Q03		
Covina, City of	01901685	1901685	1S/10W-14B01	1	3101
Covina, City of	01901686	1901686	1S/10W-12R01	2	3120
Covina, City of	01901687	1901687	1S/10W-13E01	3	3111
El Monte, City of	01901692	1901692	1S/11W-21G02	2A	2962F

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
El Monte, City of	01901693	1901693	1S/11W-21G01	3	2962D
El Monte, City of	01901694	1901694	1S/11W-21Q01	4	2963B
El Monte, City of	01901695	1901695	1S/11W-16N01	5	2951F
El Monte, City of	01901699	1901699	1S/11W-21H01	10	2972Q
El Monte, City of	01901700	1901700	1S/11W-20L01	11	2943M
Whittier, City of	01901745	1901745	2S/11W-05G01	9	2947Q
Whittier, City of	01901746	1901746	2S/11W-05G05	10	2947W
Whittier, City of	01901747	1901747	2S/11W-05G04	11	2947U
Whittier, City of	01901748	1901748	2S/11W-05K01	12	2947V
Whittier, City of	01901749	1901749	2S/11W-05G02	13	2947G
Southern California Water Company - San Gabriel	01902017	1902017	1S/11W-02C04	1 JEFFERIES	
Southern California Water Company - San Gabriel	01902018	1902018	1S/11W-02C03	2 JEFFERIES	
Southern California Water Company - San Gabriel	01902019	1902019	1S/11W-02C01	3 JEFFERIES	4198L
Southern California Water Company - San Gabriel	01902020	1902020	1S/11W-16D01	1 AZUSA	
Southern California Water Company - San Gabriel	01902024	1902024	1S/11W-18A	1 ENCINITAS	
Southern California Water Company - San Gabriel	01902027	1902027	1S/11W-09Q04	1 PERSIMMON	2960K
Southern California Water Company - San Gabriel	01902030	1902030	1N/11W-35L	1 GRAYDON	4197
Southern California Water Company - San Gabriel	01902031	1902031	1S/11W-16M	2 GID	
Southern California Water Company - San Gabriel	01902032	1902032	1S/11W-16M	1 GID	
Southern California Water Company - San Gabriel	01902034	1902034	1S/11W-10F01	FARNA 1	4179F
Southern California Water Company - San Gabriel	01902035	1902035	1S/11W-18A	2 ENCINITAS	
Arcadia, City of	01902077	1902077	1N/11W-34N05	CAM-1	4177A
Arcadia, City of	01902078	1902078	1N/11W-34N02	2 CAM	
Arcadia, City of	01902084	1902084	1S/11W-04L02	2 LGY	4168A
Sterling Mutual Water Company	01902085	1902085	1S/11W-14N	SOUTH	
Sterling Mutual Water Company	01902096	1902096	1S/11W-14N	NORTH	
Adams Ranch Mutual Water Company	01902106	1902106	1S/11W-18H	1	
Azusa Valley Water Company	01902113	1902113	1S/10W-16B01	1	3061
Azusa Valley Water Company	01902115	1902115	1N/10W-27K02	4	4285C
Azusa Valley Water Company	01902116	1902116	1N/10W-27K01	5	
Azusa Valley Water Company	01902117	1902117	1S/10W-03K	6	
Southwest Suburban Water Systems	01902119	1902119	1S/10W-20N01	149W1	
Southern California Water Company - San Gabriel	01902144	1902144	1S/12W-25A01	1 EARLE	
Southern California Water Company San Dimas Dist.	01902148	1902148	1N/9W-35	BAS-3	
Southern California Water Company San Dimas Dist.	01902149	1902149	1S/9W-02	BAS-4	
Southern California Water Company San Dimas Dist.	01902150	1902150	1N/9W-35Q11	HWY	
Southern California Water Company San Dimas Dist.	01902151	1902151	1S/9W-02	ART 1	
Southern California Water Company San Dimas Dist.	01902152	1902152	1N/9W-35	ART 2	
Polopolus, et al.	01902169	1902169	1S/10W-08L	1	
Owl Rock Products Company	01902241	1902241	1S/10W-06		

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
Southern California Water Company San Dimas Dist.	01902266	1902266	1S/9W-03	COL 1	
Southern California Water Company San Dimas Dist.	01902267	1902267	1S/9W-03	COL 2	
Southern California Water Company San Dimas Dist.	01902270	1902270	1S/9W-05	COL 6	
Southern California Water Company San Dimas Dist.	01902271	1902271	1S/9W-05J01	COL 7	4368
Southern California Water Company San Dimas Dist.	01902272	1902272	1S/9W-03E01	COL 8	438E
Southern California Water Company San Dimas Dist.	01902286	1902286	1N/9W-25	HI HO	
Maechtlen, Estate of J.J.	01902321	1902321	1S/9W-02	OLD 60	
Maechtlen, Estate of J.J.	01902322	1902322	1S/9W-01	SNIDO	
Maechtlen, Estate of J.J.	01902323	1902323	1S/9W-02	M-N	
Valley County Water District	01902356	1902356	1S/10W-07A01	3WT	4239A
Arcadia, City of	01902358	1902358	1N/11W-27F01	1 STD	4175
Monterey Park, City of	01902372	1902372	1S/11W-30F01	7	2924E
Monterey Park, City of	01902373	1902373	1S/11W-30E03	8	
California Water Company-San Marino System	01902424	1902424	1S/11W-17B05	1958 (HOWLAND)	2941M
Azusa Valley Water Company	01902425	1902425	1S/10W-03K03	7	
Monrovia Nursery	01902456	1902456	1N/10W-22	DIV	
Azusa Agricultural Water Company	01902457	1902457	1N/10W-22	2	
Azusa, City of	01902458	1902458	1N/10W-22P02	2 SOUTH	4284A
Southern California Water Company - San Gabriel	01902461	1902461	1N/11W-35L	2 GRAYDON	4197
Southwest Suburban Water Systems	01902519	1902519	1S/10W-30R01	150	
California Country Club	01902529	1902529	1S/11W-34	CLUB	
California Country Club	01902531	1902531	1S/11W-34	2 ARTES	
Azusa, City of	01902533	1902533	1N/10W-27H02	1	4295A
Azusa, City of	01902535	1902535	1N/10W-27J02	3	
Azusa, City of	01902536	1902536	1S/10W-03A01	4	4298
Azusa, City of	01902537	1902537	1N/10W-34L01	5	4277
Azusa, City of	01902538	1902538	1S/10W-03H01	6	4298A
Los Angeles, County of	01902579	1902579	2S/11W-05B	1 WHITTIER	
Los Angeles, County of	01902580	1902580	1S/11W-32Q02	2	2926D
City of Industry	01902581	1902581	1S/11W-26P02	1	
City of Industry	01902582	1902582	1S/11W-26P01	2	
City of Industry	01902583	1902583	1S/11W-36K03	A	
Mnoian, Paul, et al. (also B&B REDUIUMIX)	01902589	1902589	1S/11W-00M	1	
El Monte, City of	01902612	1902612	1S/11W-27F03	MTN. VIEW	
Los Angeles, County of	01902663	1902663	1S/11W-31C02	3	
Los Angeles, County of	01902664	1902664	1S/11W-30P02	4	
Los Angeles, County of	01902665	1902665	1S/11W-30G01	5	
Los Angeles, County of	01902666	1902666	1S/11W-30G02	6	
Adams Ranch Mutual Water Company	01902689	1902689	1S/11W-18H	2	
Monterey Park, City of	01902690	1902690	1S/11W-30F03	9	

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
Southwest Suburban Water Systems	01902760	1902760	1S/10W-31G	147W2	
Southwest Suburban Water Systems	01902762	1902762	1S/10W-20Q01	154W1	
Southwest Suburban Water Systems	01902763	1902763	1S/10W-29E	157W1	
La Verne, City of	01902769	1902769	1S/9W-02	W15-L	
Cedar Avenue Mutual Water Company	01902783	1902783	1S/11W-15L02	2	2971L
San Gabriel County Water District	01902785	1902785	1S/12W-12C01	9	4109
San Gabriel County Water District	01902786	1902786	1S/12W-12K	10	2910D
California Water Company-San Marino System	01902787	1902787	1S/11W-20B04	BR-2	
Alhambra, City of	01902789	1902789	1S/12W-01E01	LON #1	4108
Rincon Ditch	01902790	1902790	2S/11W-05R	4	
Arcadia, City of	01902791	1902791	1S/11W-08A03	2 BAL	4149C
Sunny Slope Water Company	01902792	1902792	1S/11W-06D02	9	4117C
Hemlock Mutual Water Company	01902806	1902806	1S/11W-11	SOUTH	
Corcoran Brothers	01902814	1902814	1N/10W-22	1	
Champion Mutual Water Company	01902816	1902816	1S/11W-14F	2	
Monterey Park, City of	01902818	1902818	1S/12W-25B12	10	2913N
Southern California Water Company San Dimas Dist.	01902842	1902842	1N/9W-35	ART 3	
Arcadia, City of	01902854	1902854	1S/11W-11C04	PECK 1	
La Puente Valley County Water District	01902859	1902859	1S/10W-19Q	3	
California Water Company-San Marino System	01902867	1902867	1S/11W-19F02	1963	
California American Water Company Duarte System	01902907	1902907	1N/10W-28	WILEY	
Conrock Company (also CA. PORTLAND CEMENT)	01902920	1902920	1S/11W-13F	E-DURBIN	
Driftwood Dairy	01902924	1902924	1S/11W-16	1	
Southern California Water Company - San Gabriel	01902948	1902948	1S/11W-10F02	FARNA 2	4179R
Bahnsen & Beckman Ind.	01902949	1902949	1S/11W-26	1	
Bahnsen & Beckman Ind.	01902950	1902950	1S/11W-26	2	
Ward Duck Company	01902951	1902951	1S/11W-26	3	
Dawes, Mary K.	01902952	1902952	1S/11W-26	4	
California Domestic Water Company	01902967	1902967	1S/11W-23P	6	2993PF
E. O. Collison	01902968	1902968	1S/11W-12		
Kiyan, Hideo	01902970	1902970	1S/10W-29		
Sonoco Products Company	01902971	1902971	1S/11W-26	2	
San Gabriel Country Club	01902979	1902979	1S/12W-01M	2	
Livingston-Graham, Inc.	01903006	1903006	1S/11W-01	4 EL	
Via, H.	01903012	1903012	1S/11W-24	1	
Alhambra, City of	01903014	1903014	1S/12W-11K01	11	2890
California American Water Company Duarte System	01903018	1903018	1N/10W-29R02	CR HV	4256
California Water Company-San Marino System	01903019	1903019	1S/11W-08J07	MARIPOSA-3	2940J
Monterey Park, City of	01903033	1903033	1S/11W-30M02	12	2924M
California Domestic Water Company	01903057	1903057	1S/11W-23	3	

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
California Water Company-San Marino System	01903059	1903059	1N/12W-36N02	1968	
Sully-Miller Contracting Company	01903062	1903062	1S/11W-01H	IRWINDALE-2 (BLU DIAMOND)	
Southwest Suburban Water Systems	01903067	1903067	1S/10W-30G	140W3	
Ward Duck Company	01903072	1903072	1S/11W-35	5R	
California Domestic Water Company	01903081	1903081	1S/11W-26	8	
California Country Club	01903084	1903084	1S/11W-34	SYC	
South Pasadena, City of	01903086	1903086	1S/12W-02Q04	4 WIL	4099C
Conrock Company (also CA. PORTLAND CEMENT)	01903088	1903088	1S/10W-33C	1-REL	
Monterey Park, City of	01903092	1903092	1S/12W-25J01	14	
Alhambra, City of	01903097	1903097	1S/12W-11K	7	
Owl Rock Products Company	01903119	1903119	1N/10W-27		
El Monte, City of	01903137	1903137	1S/11W-21F02	12	
Monrovia, City of	01940104	1940104	1S/11W-02H02	5	
Glendora, City of	08000003	8000003			
Beverly Acres Mutual Water Company	08000004	8000004	2S/11W-08		
Max Birenbaum	08000005	8000005	2S/11W-01		
Crown City Plating Company	08000012	8000012	1S/11W-17		
Davidson Optronics Inc.	08000013	8000013	1S/10W-17		
Green, Walter	08000027	8000027	2S/11W-08	SOUTH	
Green, Walter	08000028	8000028	2S/11W-08	NORTH	
Miller Brewing Company	08000034	8000034	1N/10W-27P01		4286
San Gabriel Valley Water Company	08000038	8000038	1S/10W-19N01		
Valley County Water District	08000039	8000039	1S/10W-18F02	11 PALM	
Sloan Ranches	08000045	8000045	1N/8W-30		
Southern California Edison Company	08000046	8000046	1S/11W-12A	110 RH (NORTH)	
Southern California Edison Company	08000047	8000047	1S/11W-14F	MURAT	
Sunny Slope Water Company	08000048	8000048	1S/11W-06J01	10	4138
Tyler Nursery	08000049	8000049	1S/11W-32		
Valencia Heights Water Company	08000051	8000051	1S/10W-24M02	1	3113A
Valencia Heights Water Company	08000052	8000052	1S/10W-24M02	1	
Valencia Heights Water Company	08000054	8000054	1S/10W-23M02	1	
Valencia Heights Water Company	08000055	8000055	1S/10W-24K01	3A	3123
Maechtlen, Trust of P.A.	08000057	8000057	1N/9W-34	DIV 1	
Monrovia, City of	08000058	8000058	1N/11W-12	DIV	
Valley County Water District	08000060	8000060	1S/10W-08A03	10 LANTE	4259B
La Puente Valley County Water District	08000062	8000062	1S/10W-19Q	4	
Conrock Company (also CA. PORTLAND CEMENT)	08000063	8000063	1N/11W-13	W-DURBIN	
Owl Rock Products Company	08000064	8000064	1N/10W-27		
El Monte, City of	08000066	8000066	1S/11W-21F02	12	
San Gabriel County Water District	08000067	8000067		11	

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
Southwest Suburban Water Systems	08000069	8000069	1S/10W-20B	139W4	
Los Angeles, County of	08000070	8000070		1 SF	
Whittier, City of	08000071	8000071	1S/11W-05C07	15	
Azusa, City of	08000072	8000072		7	
Southern California Water Company - San Gabriel	08000073	8000073		3 ENCINATAS	
Los Angeles, County of	08000074	8000074		2 SF	
Miller Brewing Company	08000075	8000075	1N/10W-33-01	1	
Miller Brewing Company	08000076	8000076	1N/10W-33-02	2	
Southwest Suburban Water Systems	08000077	8000077		147W3	
City of Industry	08000078	8000078		3	
Monrovia Nursery	08000080	8000080		DIV 18	
Hartley, David (also Ray Anderson)	08000085	8000085			
Azusa, City of	08000086	8000086		#8	
Southwest Suburban Water Company	08000087	8000087		126W2	
Los Angeles, County of	08000088	8000088		B RED	
Los Angeles, County of	08000089	8000089		N LK	
Los Angeles, County of	08000090	8000090		600	
Monrovia Nursery	09000002	9000002	1N/10W-22	DIV 2	
Monrovia Nursery	09000003	9000003	1N/10W-22	DIV 3	
Monrovia Nursery	09000006	9000006	1N/10W-22	DIV 6	
Monrovia Nursery	09000007	9000007	1N/10W-22	DIV 7	
Monrovia Nursery	09000008	9000008	1N/10W-22	DIV 8	
Monrovia Nursery	09000009	9000009	1N/10W-22	DIV 9	
Monrovia Nursery	09000011	9000011	1N/10W-22	DIV 11	
Monrovia Nursery	09000012	9000012	1N/10W-22	DIV 12	
Monrovia Nursery	09000015	9000015	1N/10W-22	DIV 15	
Monrovia Nursery	09000017	9000017	1N/10W-22	DIV 17	
AZ-Two, Inc. (also Transit Mix #2)	11900038	1-1900038	1S/10W-03	2	
Rincon Irrigation Company	11900095	1-1900095	2S/11W-04N01	2	2957H
Southern California Edison Company	11900344	1-1900344	1S/12W-25K02	28ETS	
California American Water Company Duarte System	11900497	1-1900497	1N/10W-29A03	BACON	4255A
San Gabriel Valley Water Company	11900729	1-1900729	1S/11W-14E02	1B1	2991R
Covina Irrigating Company	11900880	1-1900880	1N/10W-25R01	VALEN.#1	4326
East Pasadena Water Company, Ltd.	11901508	1-1901508	1N/11W-31R01	9	4137
Los Flores Mutual Water Company	11902098	1-1902098	1S/11W-29	1-LO	
Azusa Valley Water Company	11902118	1-1902118	1N/10W-22	DIV	
Los Angeles, County of	11902158	1-1902158	1S/09W-15	BN PK	
Azusa Agricultural Water Company	11902459	1-1902459	1N/10W-22	DIV	
Southwest Suburban Water Systems	11902518	1-1902518	1S/10W-29G	151W2	
San Gabriel Valley Water Company	11902946	1-1902946	1S/11W-14E02	1B2	

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
San Gabriel Valley Water Company	18000081	1-8000081		1B4	
San Gabriel Valley Water Company	18000082	1-8000082		1B5	
Southern California Edison Company	21900344	2-1900344	1S/12W-25K02	38W	
California American Water Company Duarte System	21900360	2-1900360	1N/10W-22	ROYAL OAKS	
San Gabriel Valley Water Company	21900749	2-1900749	1S/11W-10N	2B4	
Covina Irrigating Company	21900880	2-1900880	1N/10W-25R01	VALEN.#2	
Los Flores Mutual Water Company	21902098	2-1902098	1S/11W-29	1-HI	
Azusa Valley Water Company	21902118	2-1902118	1N/10W-22	DIV	
Southwest Suburban Water Systems	21902518	2-1902518	1S/10W-29G	151W1	
San Gabriel Valley Water Company	21902857	2-1902857	1S/11W-10N	2B6	N
San Gabriel Valley Water Company	28000065	2-8000065	1S/11W-10N	2B1	
San Gabriel Valley Water Company	31900736	3-1900736	1S/11W-30B01	8B2 (8A)	2933A
San Gabriel Valley Water Company	31900746	3-1900746	1S/11W-30B02	8B4	2933E
San Gabriel Valley Water Company	31900747	3-1900747	1S/11W-30B03	8B6 (8C)	2933F
Covina Irrigating Company	31900884	3-1900884	1N/10W-22	DIV	
Southern California Water Company San Dimas Dist.	31902287	3-1902287	1N/9W-36	MALON	
Southwest Suburban Water Systems	31902819	3-1902819	2S/10W-08E01	155W1 (VICTORIA WATER CO)	3048A
Southwest Suburban Water Systems	31902820	3-1902820	2S/10W-08E02	155W2 (VICTORIA WATER CO)	3048
San Gabriel Valley Water Company	31903103	3-1903103	1S/11W-30B04	8B1	
San Gabriel Valley Water Company	41900739	4-1900739	1S/11W-34F01	11B1	2975P
San Gabriel Valley Water Company	41900745	4-1900745	1S/11W-34F02	11B3 (11B)	2975N
Southwest Suburban Water Systems	41901605	4-1901605	1S/10W-28H02	101W1	
Southwest Suburban Water Systems	41901607	4-1901607	1S/10W-23J03	103W1	
Southern California Water Company San Dimas Dist.	41902157	4-1902157	1N/09W-25	GOLF	
San Gabriel Valley Water Company	41902713	4-1902713	1S/11W-34F03	11B5	2975Q
San Gabriel Valley Water Company	48000083	4-8000083		11B7	
San Gabriel Valley Water Company	51902858	5-1902858	1S/11W-24Q07	B4B	
San Gabriel Valley Water Company	51902947	5-1902947	1S/11W-24Q09	B4C	
San Gabriel Valley Water Company	61900718	6-1900718	1S/11W-26K01	B5A	2994V
San Gabriel Valley Water Company	61900719	6-1900719	1S/11W-26K	B5B	
San Gabriel Valley Water Company	71900721	7-1900721	1S/10W-19L01	B6B4 (B6B)	3033L
San Gabriel Valley Water Company	71903093	7-1903093	1S/10W-19L02	B6B1 (B6C)	3033K
San Gabriel Valley Water Company	78000084	7-8000084		B6B2	
San Gabriel Valley Water Company	81902525	8-1902525	2S/11W-04	B1	
San Gabriel Valley Water Company	81902635	8-1902635	2S/11W-04		
San Gabriel Valley Water Company	91901435	9-1901435	1S/10W-31P	B7A	
San Gabriel Valley Water Company	91901436	9-1901436	1S/10W-31L	B-7	3036
San Gabriel Valley Water Company	91901437	9-1901437	1S/10W-31E	B7C (B9)	3025A
San Gabriel Valley Water Company	91901439	9-1901439	1S/10W-31F	B-11A	
San Gabriel Valley Water Company	91901440	9-1901440	1S/10W-31P05	B-7B (B7C)	3026D

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
San Gabriel Valley Water Company	98000068	9-8000068			
L.A. County Flood Control District	A1900018	A-1900018	1S/12W-10E01		4069
Rincon Ditch	A1900052	A-1900052			
California American Water Company Duarte System	A1900360	A-1900360	1N/10W-22	CHAMBERLIN	
San Gabriel Valley Water Company	A1900749	A-1900749	1S/11W-10N06	2C	2970M
Covina Irrigating Company	A1900884	A-1900884	1N/10W-22	118 SUBURBAN	
Southwest Suburban Water Company	A1901622	A-1901622	1S/10W-23M04	133W-1	3093F
Southern California Water Company - San Gabriel	A1902032	A-1902032	1S/11W-16M03	GRIDLEY #1	
San Dimas - La Verne Recreational Facility Auth.	A1902286	A-1902286			
Azusa Agricultural Water Company	A1902458	A-1902458	1N/10W-22	1	
Southwest Suburban Water Company	A1902518	A-1902518	1S/10W-29G	151W-1	
San Gabriel Valley Water Company	A1902713	A-1902713	1S/11W-34F03	11C	2975Q
Sonoco Products Company	A1902786	A-1902786	1S/11W-26	1	
San Gabriel Valley Water Company	A1902857	A-1902857	1S/11W-10N07	2D	
San Gabriel Valley Water Company	A1902946	A-1902946	1S/11W-14E	1C	
San Gabriel Valley Water Company	A1903103	A-1903103	1S/11W-30B	8D	
Valencia Heights Water Company	A8000052	A-8000052	1S/10W-24M01	#2	3113
San Gabriel Valley Water Company	A8000065	A-8000065	1S/11W-10N09	2E	
U.S. Pipe & Foundary Company	A8000067	A-8000067	1S/10W-06		
Southwest Suburban Water Company	A8000069	A-8000069		139W-4	
Southwest Suburban Water Company	A8000077	A-8000077		147W-3	
California American Water Company Duarte System	B1900360	B-1900360	1N/10W-22	ROUNDS	
Covina Irrigating Company	B1900884	B-1900884	1N/10W-22	119 SUBURBAN	
California American Water Company Duarte System	C1900360	C-1900360	1N/10W-22	MERRILL	
Covina Irrigating Company	C1900884	C-1900884	1N/10W-22	168 SUBURBAN	
California American Water Company Duarte System	D1900360	D-1900360	1N/10W-22	POINDEXTER	
Covina Irrigating Company	D1900884	D-1900884	1N/10W-22	CAL. CITY CIEN.	
California American Water Company Duarte System	E1900360	E-1900360	1N/10W-22	FOWLER	
Covina Irrigating Company	E1900884	E-1900884	1N/10W-22	AZUSA VLY	
California American Water Company Duarte System	F1900360	F-1900360	1N/10W-22	VAN TASSEL	
Covina Irrigating Company	F1900884	F-1900884	1N/10W-22	COVINA FOREST	
California American Water Company Duarte System	G1900360	G-1900360	1N/10W-22	LEMON	
Covina Irrigating Company	G1900884	G-1900884	1N/10W-22	COVINA CYPRESS	
California American Water Company Duarte System	H1900360	H-1900360	1N/10W-22	WOODLYN LANE	
Covina Irrigating Company	H1900884	H-1900884	1N/10W-22	VALENCIA HTS.	
Covina Irrigating Company	I1900884	I-1900884	1N/10W-22	VALENCIA HTS.	
L.A. County Flood Control District	Z1000001	Z-1000001	1S/12W-13H01		2911D
L.A. County Flood Control District	Z1000002	Z-1000002	2S/11W-05L01		2947F
L.A. County Flood Control District	Z1000003	Z-1000003	1S/11W-32H05		2955X
L.A. County Flood Control District	Z1000004	Z-1000004	1S/11W-28R01		2964G

Producer's Name	TDM II Well Code	Actual Record. Number	State Well Number	Owner Number	L.A. Co. F.C.D. Number
L.A. County Flood Control District	Z1000005	Z-1000005	1S/11W-22F02		2972M
L.A. County Flood Control District	Z1000006	Z-1000006	1S/10W-07R02		3030F
L.A. County Flood Control District	Z1000007	Z-1000007	2S/10W-06B05		3036N
L.A. County Flood Control District	Z1000008	Z-1000008	1S/10W-23F01		3102
L.A. County Flood Control District	Z1000009	Z-1000009	1N/11W-33Q01		4167A
L.A. County Flood Control District	Z1000010	Z-1000010	1S/11W-10F02		4179K
L.A. County Flood Control District	Z1000011	Z-1000011	1S/11W-03P02		4179H

bases at a later date should it become desirable. The use of UTM's is also convenient for conducting spatial analysis and plotting of the data. The San Gabriel Basin is located in Zone 11 of the UTM system. The units stored in the data base are meters from the center of Zone 11. Due to the limitation of the number of digits available to store the longitudinal (north-south) coordinate (or y-coordinate in TDM II), 3,700,000 meters should be added to the TDM II y-coordinate to get the correct absolute UTM coordinate value.

The second data set contains information on the well depth, elevation with respect to the National Geodetic Vertical Datum (NGVD) for the top of the well casing, date the well was drilled, gravel pack interval, well seal intervals, and intervals for 3 perforated or screened zones. The well depth is given as the total depth of the well in feet from the ground surface. Drilling dates have not been entered for many of the wells in the data base due to the lack of readily available information. This information may be obtained at a later date if it is determined to be of value for future investigations; otherwise, this information has not been considered pertinent to the SSP.

Generally, gravel pack is placed from the bottom of the well to above the upper most perforated intervals or close to the surface. This information was not generally available. Few wells are sealed except for the upper few feet, although most newer wells may have a sanitary seal of several tens of feet. Information on bentonite or cement grout seals has not been obtained for most of the wells. Where readily available, perforated or screened intervals have been entered into the data base. The data base allows for three intervals to be identified. In some cases, more than three intervals exist, and in these cases, the third interval represents the top of the third interval to the bottom of the last perforated interval. Perforated intervals are measured from the ground surface toward the bottom of the well.

Table B-24 is a printout of the available information on well locations and completion details. This printout is ordered by TDM II well number which can be cross referenced according to other numbering schemes using Table B-23.

B.3.3 WATER QUALITY DATA

The third data set in the computerized data base is water quality data. Data obtained from the files of the CDHS, AB 1803 program and SSP have been entered into this data set. Information in this data set includes the following: location (well code), chemical parameter, laboratory, sample date, a data flag, value (concentration), and units of concentration.

The location refers to the TDM II number assigned to a well entered into the data base. This number can be cross referenced with Table B-23 to determine other designations assigned to the well where the designations are known.

The chemical parameter is the name of a chemical constituent for which data are being reported. The most common name of the constituent is used in the data base. The name is spelled out in full unless it is too long to fit in the available space. Currently, 34 chemical parameters have been entered into the data base. Table B-25 lists these parameters and defines them where a definition is necessary. In several cases, a group parameter has been identified to represent a group of chemical constituents. For example, EPA Method 624 - No Compound, has been defined to indicate that EPA Method 624 has been conducted on a water sample and compounds analyzed for by this method have not been detected. Tables B-1 through B-3 and B-6 through B-8 provide the appropriate list of chemicals by laboratory represented by the

Table B-24

TDM II

TECHNICAL DATA MANAGEMENT SYSTEM

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
01900001	402625	65905	80	0.00	. .	-	-	-	-	-
01900010	397270	72821	764	403.90	. .					
01900011	396798	74039	798	491.30	. .					
01900012	397084	72235	886	428.80	. .	-	-	260- 288	300- 342	475- 735
01900013	396920	72927	855	440.40	. .	-	-	247- 293	313- 339	382- 743
01900014	398067	71886	872	380.80	. .					
01900015	397669	72058	0	0.00	. .					
01900016	398677	70913	800	0.00	. .	-	-	192- 216	351- 386	597- 748
01900017	398897	75205	0	500.80	. .					
01900018	395625	73631	561	534.60	. .	-	-	237- 325	375- 496	-
01900026	400502	75767	1002	502.70	. .	-	-	300-1002	-	-
01900027	411242	74135	600	424.00	. .	-	-	250- 580	-	-
01900028	411354	74115	600	424.00	. .	-	-	250- 580	-	-
01900029	414510	74440	199	0.00	. .	-	-	112- 121	172- 175	-
01900031	410608	70820	0	0.00	. .					
01900032	411452	73953	0	0.00	. .					
01900034	413103	74121	540	456.00	. .	-	-	300- 524	-	-
01900035	411644	71041	600	0.00	. .	-	-	250- 582	-	-
01900042	413072	67423	0	0.00	. .					
01900043	408124	74753	200	0.00	. .	-	-	-	-	-
01900052	403421	64666	0	0.00	. .					
01900091	424004	74637	0	0.00	. .					
01900092	0	0	0	0.00	. .					
01900093	411943	78871	0	0.00	. .					
01900094	403083	63991	343	216.50	. .	-	-	136- 264	-	-
01900106	409619	75139	300	0.00	. .	-	-	130- 296	-	-
01900117	414484	73670	310	452.00	. .	-	-	200- 305	-	-
01900120	407361	72411	202	0.00	. .	-	-	140- 190	-	-
01900121	407391	72379	175	0.00	. .	-	-	125- 165	-	-
01900132	403595	64946	0	0.00	. .					
01900331	405221	67253	0	0.00	. .					
01900332	405285	67146	0	0.00	. .					
01900337	410948	67202	200	0.00	. .	-	-	-	-	-
01900343	400115	70056	0	0.00	. .					
01900354	411558	77132	524	513.10	. .	-	-	235- 512	-	-
01900355	410058	76349	600	450.00	. .	-	-	300- 500	-	-
01900356	408881	76496	352	417.20	. .					
01900357	412739	78167	297	591.40	. .	-	-	90- 270	-	-
01900358	415211	79472	192	708.20	. .	-	-	75- 120	-	-
01900363	409820	73348	0	0.00	. .					

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
01900364	409795	73258	0	0.00	. .					
01900365	409736	73317	476	363.60	. .	-	-	74- 470	-	-
01900390	417815	80380	0	0.00	. .					
01900415	409656	79243	0	0.00	. .					
01900417	407829	75273	476	363.60	. .	-	-	74- 470	-	-
01900418	407758	75165	440	368.10	. .	-	-	73- 118	136- 180	182- 420
01900419	407552	75511	500	370.50	. .	-	-	80- 122	126- 133	134- 346
01900420	408120	75336	530	378.00	. .	-	-	233- 505	-	-
01900425	0	0	0	0.00	. .					
01900453	399445	69301	410	263.20	. .					
01900454	399470	69237	450	262.50	. .	-	-	209- 422	-	-
01900455	399493	69170	1505	260.50	. .	-	-	210-1110	-	-
01900456	399514	69115	480	259.50	. .	-	-	194- 456	-	-
01900457	399667	69058	600	260.00	. .					
01900458	399688	68999	604	256.50	. .					
01900510	399562	69371	465	264.00	. .					
01900511	399599	69317	0	0.00	. .					
01900512	399655	69233	428	266.00	. .	-	-	377- 406	-	-
01900513	399686	69166	424	265.00	. .	-	-	322- 416	-	-
01900514	398790	70589	650	309.50	. .	-	-	205- 585	-	-
01900515	398847	70528	0	0.00	. .					
01900547	398670	75050	750	551.40	. .	-	-	404- 565	-	-
01900693	426804	76325	0	0.00	. .					
01900694	426807	76230	0	0.00	. .					
01900725	400528	70008	402	281.00	. .	-	-	318- 343	-	-
01900733	0	0	0	0.00	. .	-	-	-	-	-
01900791	400482	70343	0	0.00	. .					
01900792	400552	70347	0	0.00	. .					
01900826	421440	77904	0	0.00	. .					
01900827	415797	78572	0	0.00	. .					
01900828	421588	78196	520	910.00	. .	-	-	300- 520	-	-
01900829	415774	78643	255	681.10	. .					
01900830	415859	78643	0	0.00	. .					
01900831	415321	75776	500	528.80	. .	-	-	252- 474	-	-
01900881	415631	74656	485	496.00	. .					
01900882	412627	72501	500	0.00	. .	-	-	198- 251	278- 484	-
01900883	412776	72414	335	401.50	. .	-	-	120- 330	-	-
01900885	412572	71968	398	401.30	. .	-	-	120- 330	-	-
01900908	407326	71972	0	0.00	. .					
01900918	401196	71656	403	330.30	. .	-	-	70- 388	-	-

LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
01900920	401930	73797	1018	383.50	. .	-	-	360-1008	-	-
01900921	400272	72512	0	0.00	. .					
01900923	400790	70343	984	274.00	. .	-	-	254- 796	-	-
01900924	403347	73129	150	349.20	. .	-	-	-	-	-
01900925	403437	73205	0	0.00	. .					
01900926	400489	72691	670	367.50	. .	-	-	323- 650	-	-
01900927	400556	72618	675	370.60	. .	-	-	170- 662	-	-
01900934	396376	74875	690	505.30	. .	-	-	362- 638	-	-
01900935	398452	75268	785	508.10	. .					
01900961	409667	75974	0	0.00	. .					
01900963	412983	76499	450	549.70	. .	-	-	315- 430	-	-
01901013	407467	75316	550	360.70	. .	-	-	275- 492	505- 528	-
01901014	407434	75175	656	364.30	. .	-	-	256- 634	-	-
01901015	402782	75956	862	468.50	. .	-	-	260- 812	-	-
01901034	426921	74735	0	0.00	. .					
01901055	402074	72035	0	0.00	. .					
01901178	407016	73121	0	0.00	. .					
01901181	407172	69498	0	0.00	. .					
01901182	407094	69332	0	0.00	. .					
01901183	408013	70087	0	0.00	. .	-	-	-	-	-
01901185	407256	69882	0	0.00	. .					
01901198	429373	78333	0	0.00	. .					
01901199	0	0	0	0.00	. .	-	-	-	-	-
01901200	428327	75082	120	1185.00	. .	-	-	80- 120	-	-
01901201	428230	75038	0	0.00	. .					
01901202	428313	75011	0	0.00	. .					
01901307	0	0	0	0.00	. .					
01901411	405816	71748	0	0.00	. .					
01901429	0	0	0	0.00	. .	-	-	-	-	-
01901430	403334	65021	0	0.00	. .					
01901432	403265	64964	0	0.00	. .					
01901433	403207	65002	0	0.00	. .					
01901434	403184	64932	0	0.00	. .					
01901441	402970	70966	0	0.00	. .					
01901460	410888	70015	272	336.50	. .	-	-	110- 228	-	-
01901492	408686	74005	350	0.00	. .	-	-	230- 345	-	-
01901493	408876	74036	350	366.80	. .	-	-	230- 345	-	-
01901521	405999	71236	0	0.00	. .					
01901522	405979	71163	0	0.00	. .	-	-	114- 138	142- 148	186- 195
01901523	421868	78716	525	940.50	. .					

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
01901524	415329	74151	361	472.10	. .	-	-	-	-	-
01901525	415308	74077	500	472.10	. .	-	-	-	-	-
01901526	421801	78645	693	968.00	. .	-	-	498- 692	-	-
01901596	410874	67093	214	312.50	. .					
01901597	412996	69423	0	0.00	. .					
01901598	412414	70856	0	0.00	. .					
01901599	412365	70790	0	0.00	. .					
01901600	412447	70785	0	0.00	. .					
01901602	0	0	0	0.00	. .					
01901604	416352	69877	0	0.00	. .					
01901606	413849	68366	728	0.00	65.01.30	-	-	195- 702	-	-
01901608	412435	67571	400	341.80	. .	-	-	149- 370	-	-
01901609	415195	69660	0	0.00	. .					
01901610	412407	70344	0	0.00	. .					
01901611	412945	69386	0	0.00	. .					
01901612	411824	68451	0	0.00	. .					
01901613	416421	70367	0	0.00	. .					
01901615	413073	67804	0	0.00	. .					
01901616	413305	67210	420	0.00	30.04.30	-	-	130- 232	232- 260	260- 235
01901617	411233	63007	0	0.00	. .					
01901618	413884	68196	0	0.00	. .					
01901619	417179	69892	248	459.50	. .	-	-	191- 340	-	-
01901620	417266	69898	0	460.20	. .	-	-	191- 340	-	-
01901621	412007	63705	436	342.00	. .	-	-	316- 426	-	-
01901622	416413	69872	0	0.00	. .					
01901623	411160	67483	514	322.00	. .					
01901624	415460	69161	428	613.00	. .	-	-	140- 401	-	-
01901625	412453	63615	198	343.50	. .	-	-	39- 42	83- 87	95- 166
01901627	407056	69192	351	295.50	. .					
01901669	399782	72623	340	368.50	. .	-	-	290- 340	-	-
01901670	399801	72529	401	0.00	. .	-	-	205- 401	-	-
01901671	398355	75329	910	515.80	. .	-	-	300- 893	-	-
01901672	397325	74161	715	429.10	. .	-	-	327- 572	-	-
01901679	395659	74829	750	551.40	. .	-	-	404- 565	-	-
01901681	398024	74342	720	478.90	. .	-	-	222- 690	-	-
01901682	398094	74347	0	0.00	. .					
01901685	417279	72314	548	536.60	. .	-	-	387- 495	-	-
01901686	419477	72646	515	619.50	. .	-	-	335- 434	-	-
01901687	0	0	0	0.00	. .	-	-	-	-	-
01901692	404482	70444	0	0.00	. .					

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
01901693	404608	70492	285	287.50	. .	-	-	65- 265	-	-
01901694	404595	69668	226	272.50	. .	-	-	100- 114	119- 190	-
01901695	403732	71310	358	286.00	. .	-	-	126- 154	178- 190	-
01901699	404702	70717	516	277.00	. .					
01901700	402470	70090	1020	316.00	. .					
01901745	402927	65612	665	213.00	. .					
01901746	402883	65530	0	0.00	. .					
01901747	402844	65470	837	212.50	. .	-	-	199- 832	-	-
01901748	402972	65228	646	213.50	. .	-	-	189- 616	-	-
01901749	402809	65401	280	215.00	. .					
01902017	407492	75601	0	0.00	. .					
01902018	407452	75521	0	0.00	. .					
01902019	407552	75511	654	368.50	. .	-	-	199- 213	243- 246	296- 626
01902020	403844	72554	0	0.00	. .					
01902024	401721	72298	0	0.00	. .					
01902027	404447	72772	800	313.00	. .	-	-	156- 360	366- 798	-
01902030	407355	76531	540	403.00	. .	-	-	116- 456	-	-
01902031	403645	71598	0	0.00	. .					
01902032	403868	71789	196	0.00	. .	-	-	-	-	-
01902034	405759	73495	540	326.50	. .					
01902035	401669	72464	0	0.00	. .					
01902077	405291	76075	714	404.00	. .					
01902078	405296	75982	0	0.00	. .					
01902084	0	0	595	371.60	. .	-	-	144- 565	-	-
01902085	406840	71391	0	0.00	. .					
01902096	406804	71296	0	0.00	. .					
01902106	401672	72127	0	0.00	. .					
01902113	414123	72298	0	424.70	. .					
01902115	415877	77981	298	424.70	. .					
01902116	415957	77981	0	0.00	. .					
01902117	415804	74938	660	0.00	. .	-	-	-	-	-
01902119	411627	69547	0	0.00	. .					
01902144	400245	69393	0	0.00	. .					
01902148	427606	75700	0	0.00	. .					
01902149	426846	75557	0	0.00	. .					
01902150	426926	75847	0	0.00	. .					
01902151	426824	74437	0	0.00	. .					
01902152	426931	75936	0	0.00	. .					
01902169	412036	73326	0	0.00	. .					
01902241	410203	74513	200	0.00	. .	-	-	220- 284	-	-

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
01902266	424821	75256	0	0.00	. .					
01902267	425033	75277	0	0.00	. .					
01902270	422126	74909	248	796.40	. .	-	-	103- 190	-	-
01902271	422802	74791	316	822.20	. .					
01902272	424745	74971	137	930.00	. .					
01902286	428984	77419	0	0.00	. .					
01902321	427728	75104	0	0.00	. .					
01902322	427836	75148	0	0.00	. .					
01902323	427745	75203	0	0.00	. .					
01902356	411139	74130	0	0.00	. .					
01902358	405756	78495	800	499.00	. .					
01902372	400800	68964	0	237.50	. .					
01902373	400745	68688	0	233.00	. .					
01902424	403010	72403	1020	316.00	. .					
01902425	415750	74886	980	0.00	. .	-	-	-	-	-
01902456	0	0	0	0.00	. .	-	-	-	-	-
01902457	415403	79221	0	0.00	. .					
01902458	415341	79121	243	695.00	. .	-	-	133- 243	-	-
01902461	407437	76422	540	403.00	. .	-	-	116- 456	-	-
01902519	411362	67937	0	0.00	. .					
01902529	406292	66790	0	0.00	. .					
01902531	406408	66905	106	0.00	71.11.18	-	0- 0	71- 94	-	-
01902533	416397	78162	288	668.90	. .					
01902535	416397	77996	0	0.00	. .					
01902536	416221	75434	0	0.00	. .					
01902537	415256	76254	655	560.00	. .	-	-	350- 655	-	-
01902538	416266	75308	676	520.20	. .	-	-	396- 654	-	-
01902579	402814	65954	0	0.00	. .					
01902580	402811	66448	10	202.50	. .	-	-	4- 7	-	-
01902581	407271	68040	135	0.00	. .	-	-	-	-	-
01902582	407241	67952	0	0.00	. .					
01902583	409154	66584	0	0.00	. .					
01902589	408527	74860	0	0.00	. .					
01902612	405668	68712	0	0.00	. .					
01902663	400797	67534	0	0.00	. .					
01902664	400800	67936	0	0.00	. .					
01902665	401379	68788	0	0.00	. .					
01902666	400440	68132	0	228.00	. .	-	-	-	-	-
01902689	401831	71988	0	0.00	. .					
01902690	400793	68821	0	0.00	. .					

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
01902760	410846	67182	0	0.00	. .					
01902762	412403	69550	0	0.00	. .					
01902763	411682	68720	0	0.00	. .					
01902769	427625	75376	0	0.00	. .					
01902783	405724	71599	0	0.00	. .					
01902785	399279	74137	784	437.60	. .	-	-	382- 734	-	-
01902786	399738	73315	827	368.50	. .	-	-	325- 327	-	-
01902787	402965	71056	0	0.00	. .					
01902789	398898	75334	801	500.10	. .					
01902790	403270	64677	0	0.00	. .					
01902791	403336	74148	0	380.00	. .					
01902792	400493	75677	1207	496.30	. .					
01902806	407248	72992	0	0.00	. .					
01902814	416191	79511	0	0.00	. .					
01902816	407220	72213	285	0.00	. .	-	-	-	-	-
01902818	399535	69052	670	268.50	. .					
01902842	426743	75678	0	0.00	. .					
01902854	407256	74169	0	0.00	. .					
01902859	410865	69595	0	0.00	. .					
01902867	400789	70273	0	0.00	. .					
01902907	413838	78993	0	0.00	. .					
01902920	408889	71778	0	0.00	. .					
01902924	404837	72613	0	331.20	. .					
01902948	405599	73708	0	0.00	. .	-	-	-	-	-
01902949	407311	68974	0	0.00	. .					
01902950	407252	68845	0	0.00	. .					
01902951	407169	68196	106	0.00	. .	-	-	-	-	-
01902952	0	0	0	0.00	. .					
01902967	407248	69627	0	0.00	. .					
01902968	0	0	0	0.00	. .	-	-	-	-	-
01902970	412789	69202	0	0.00	. .					
01902971	408096	68138	0	0.00	. .					
01902979	398765	75050	0	0.00	. .					
01903006	408745	73985	175	0.00	. .	-	-	-	-	-
01903012	409309	70125	0	0.00	. .					
01903014	397972	73358	830	418.80	. .	-	-	335- 777	-	-
01903018	413026	77568	600	576.70	. .	-	-	350- 580	-	-
01903019	403320	73241	1000	351.10	. .					
01903033	400437	68283	0	232.00	. .					
01903057	406954	69129	0	0.00	. .					

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
01903059	398833	75958	0	0.00	. .					
01903062	409531	75279	600	0.00	. .	-	-	200- 590	-	-
01903067	410941	68673	562	0.00	. .	-	-	-	-	-
01903072	407095	68273	0	0.00	. .					
01903081	406918	68957	0	0.00	. .					
01903084	406355	66780	106	0.00	. .	-	-	-	-	-
01903086	398154	74340	0	0.00	. .					
01903088	413728	77256	350	0.00	. .	-	-	-	-	-
01903092	400054	68382	0	0.00	. .					
01903097	397981	73198	800	417.80	. .	-	-	320- 652	-	-
01903119	414894	78171	200	0.00	. .	-	-	80- 206	-	-
01903137	403990	70489	0	0.00	. .	-	-	-	-	-
01940104	408091	75380	0	0.00	. .					
08000003	0	0	0	0.00	. .					
08000004	403428	63809	0	0.00	. .					
08000005	0	0	0	0.00	. .	-	-	-	-	-
08000012	402712	72003	800	0.00	. .	-	-	-	-	-
08000013	0	0	0	0.00	. .					
08000027	403256	64383	0	0.00	. .					
08000028	403152	64335	0	0.00	. .					
08000034	415610	77766	300	625.50	. .	-	-	157- 284	-	-
08000038	0	0	0	0.00	. .	-	-	-	-	-
08000039	410564	71770	0	0.00	. .					
08000045	429384	78236	0	0.00	. .					
08000046	409652	73985	292	0.00	63.11.21	-	-	228- 268	-	-
08000047	408138	71899	354	0.00	72.08.29	-	0- 0	198- 228	276- 283	323- 334
08000048	401769	75023	1020	456.30	. .	-	-	320- 101	-	-
08000049	403260	67190	0	0.00	. .	-	-	-	-	-
08000051	418297	69880	475	472.00	. .	-	-	159- 311	-	-
08000052	418341	69941	0	0.00	. .					
08000054	418822	70049	0	0.00	. .					
08000055	418389	70011	0	0.00	. .					
08000057	0	0	0	0.00	. .					
08000058	0	0	0	0.00	. .					
08000060	412880	74100	600	451.50	. .	-	-	300- 600	-	-
08000062	410786	69610	0	0.00	. .					
08000063	0	0	0	0.00	. .					
08000064	0	0	0	0.00	. .	-	-	-	-	-
08000066	403990	70489	0	0.00	. .	-	-	-	-	-
08000067	400170	72647	883	0.00	. .	-	-	350- 800	-	-

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
08000069	412241	70609	0	0.00	. .					
08000070	412910	75078	0	0.00	. .					
08000071	402507	65872	0	0.00	. .					
08000072	415427	79349	0	0.00	. .					
08000073	406066	73511	0	0.00	. .					
08000074	0	0	0	0.00	. .					
08000075	413317	76474	0	0.00	. .					
08000076	413313	76606	0	0.00	. .					
08000077	410795	66993	0	0.00	. .					
08000078	407166	67851	0	0.00	. .					
08000080	0	0	0	0.00	. .					
08000085	0	0	0	0.00	. .					
08000086	0	0	0	0.00	. .	-	-	-	-	-
08000087	0	0	0	0.00	. .	-	-	-	-	-
08000088	0	0	0	0.00	. .	-	-	-	-	-
08000089	0	0	0	0.00	. .	-	-	-	-	-
08000090	0	0	0	0.00	. .	-	-	-	-	-
09000002	0	0	0	0.00	. .					
09000003	0	0	0	0.00	. .					
09000006	0	0	0	0.00	. .					
09000007	0	0	0	0.00	. .					
09000008	0	0	0	0.00	. .					
09000009	0	0	0	0.00	. .					
09000011	0	0	0	0.00	. .					
09000012	0	0	0	0.00	. .					
09000015	0	0	0	0.00	. .					
09000017	0	0	0	0.00	. .					
11900038	414858	75362	0	0.00	. .	-	-	-	-	-
11900095	403587	64875	326	226.00	. .	-	-	-	-	-
11900344	399928	68558	0	0.00	. .					
11900497	413107	78684	226	631.90	. .					
11900729	406862	72073	198	327.00	. .	-	-	128- 193	-	-
11900880	419547	77660	648	704.70	. .	-	-	-	-	-
11901508	401867	76211	1006	503.00	. .	-	-	514- 916	-	-
11902098	0	0	0	0.00	. .	-	-	-	-	-
11902118	0	0	0	0.00	. .					
11902158	425274	72267	0	0.00	. .	-	-	-	-	-
11902459	0	0	0	0.00	. .	-	-	-	-	-
11902518	412418	68851	0	0.00	. .					
11902946	406806	73708	0	0.00	. .	-	-	-	-	-

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
1B000081	0	0	0	0.00	. .	-	-	-	-	-
1B000082	0	0	0	0.00	. .	-	-	-	-	-
21900344	399928	68558	0	0.00	. .					
21900360	414913	79558	0	0.00	. .					
21900749	405327	72857	0	0.00	. .					
21900880	419547	77660	648	704.70	. .	-	-	-	-	-
21902098	0	0	0	0.00	. .	-	-	-	-	-
2190211B	0	0	0	0.00	. .					
21902518	412417	68851	0	0.00	. .					
21902857	405322	72782	0	0.00	. .					
2B000065	405242	72821	0	0.00	. .					
31900736	401274	69396	301	238.00	. .					
31900746	401228	69341	312	232.00	. .	-	-	260- 300	-	-
31900747	401197	69279	538	234.50	. .					
31900884	0	0	0	0.00	. .	-	-	-	-	-
31902287	428035	77193	0	0.00	. .	-	-	-	-	-
31902819	411552	64040	200	0.00	. .					
31902820	411642	63992	282	0.00	. .					
31903103	401178	69213	0	0.00	. .					
41900739	405827	67170	685	249.00	. .					
41900745	405769	67113	685	249.00	. .					
41901605	414608	68762	428	0.00	. .	-	-	-	-	-
41901607	417754	69718	0	0.00	. .					
41902157	428424	78138	0	0.00	. .	-	-	-	-	-
41902713	405703	67078	419	249.00	. .					
4B000083	0	0	0	0.00	. .	-	-	-	-	-
51902858	409206	69399	0	0.00	. .					
51902947	409281	69453	0	0.00	. .					
61900718	407719	68432	510	285.50	. .	-	-	110- 430	-	-
61900719	407778	68363	0	0.00	. .					
71900721	410565	69928	474	0.00	. .	-	-	276- 462	-	-
71903093	410618	69906	478	333.50	. .	-	-	276- 462	-	-
7B000084	0	0	0	0.00	. .	-	-	-	-	-
81902525	403826	65549	0	0.00	. .					
81902635	403699	65466	0	0.00	. .					
91901435	0	0	0	0.00	. .	-	-	-	-	-
91901436	410552	66607	875	307.60	. .					
91901437	410160	67046	401	307.40	. .					
91901439	410333	67031	0	0.00	. .					
91901440	410495	66438	810	303.50	. .	-	-	280- 760	-	-

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
9B000068	410417	66343	0	0.00	. .					
A1900018	395457	73644	561	534.60	. .	-	-	237- 496	-	-
A1900052	403421	64666	0	0.00	. .					
A1900360	414913	79558	0	0.00	. .					
A1900749	405327	72856	622	311.00	. .	-	-	175- 603	-	-
A1900884	0	0	0	0.00	. .					
A1901622	416413	69872	0	0.00	. .					
A1902032	403585	68476	0	0.00	. .	-	-	-	-	-
A1902286	428984	77418	0	0.00	. .					
A1902458	415341	79121	0	0.00	. .					
A1902518	412417	68851	0	0.00	. .					
A1902713	405703	67078	419	249.00	. .					
A1902786	408160	68195	0	0.00	. .					
A1902857	405322	72782	0	0.00	. .					
A1902946	406800	73700	0	0.00	. .	-	-	-	-	-
A1903103	401178	69213	0	0.00	. .					
A8000052	418341	69941	0	0.00	. .					
A8000065	405242	72821	0	0.00	. .					
A8000067	410825	74269	450	0.00	. .	-	-	270- 430	-	-
A8000069	412241	70609	0	0.00	. .					
A8000077	410795	66993	1020	0.00	80.05.08	-	0- 110	300-1000	-	-
B1900360	414913	79558	0	0.00	. .					
B1900884	0	0	0	0.00	. .					
C1900360	414913	79558	0	0.00	. .					
C1900884	0	0	0	0.00	. .					
D1900360	414913	79558	0	0.00	. .					
D1900884	0	0	0	0.00	. .					
E1900360	414913	79558	0	0.00	. .					
E1900884	0	0	0	0.00	. .					
F1900360	414913	79558	0	0.00	. .					
F1900884	0	0	0	0.00	. .					
G1900360	414913	79558	0	0.00	. .					
G1900884	0	0	0	0.00	. .					
H1900360	414913	79558	0	0.00	. .					
H1900884	0	0	0	0.00	. .					
I1900884	0	0	0	0.00	. .					
Z1000001	400043	71917	306	342.80	. .	-	-	296- 301	-	-
Z1000002	402507	64909	101	215.90	. .	-	-	48- 97	-	-
Z1000003	403344	67345	80	231.90	. .	-	-	0- 80	-	-
Z1000004	0	0	0	0.00	. .					

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LOCATION	X COORD	Y COORD	WELL DEPTH	TOP CASING ELEV	DRILLING DATE	GRAVEL PACK INTERVAL	WELL SEALED INTERVAL	1ST PERF INTERVAL	2ND PERF INTERVAL	3RD PERF INTERVAL
Z1000005	405945	70177	140	291.90	. .					
Z1000006	411384	72748	200	387.70	. .	-	-	75- 195	-	-
Z1000007	411023	65926	116	307.00	. .	-	-	113- 116	-	-
Z1000008	417053	70366	505	498.80	. .	-	-	-	-	-
Z1000009	404257	76214	252	408.10	. .	-	-	242- 257	-	-
Z1000010	0	0	0	347.50	. .	-	-	-	-	-
Z1000011	405648	74370	350	347.10	. .	-	-	-	-	-

TABLE B-25
LIST OF CHEMICAL PARAMETERS ENTERED INTO
THE TDM II SAN GABRIEL BASIN DATA BASE

Parameter	Definition
1,1,1-Trichloroethane	
1,1-Dichloroethane	
1,1-Dichloroethylene	
1,2-Dichloroethane	
EPA Method 624-No Compound	EPA Method 624 has been performed on a water sample and compounds analyzed for by this method have not been detected. Laboratory dependent list.
EPA Method 624-Compounds D	EPA Method 624 has been performed on a water sample and some compounds analyzed for by this method have been detected. Laboratory dependent list.
EPA Method 625-No Compound	EPA Method 625 has been performed on a water sample and compounds have not been detected. Laboratory dependent list.
EPA Method 625-Compounds D	EPA Method 625 has been performed on a water sample and some compounds analyzed for by this method have been detected. Laboratory dependent list.
Agricultural Chemicals-Non	Agricultural chemicals have been analyzed for but none have been detected. Laboratory dependent list.
Agricultural Chemicals-DET	Agricultural chemicals have been analyzed for and some have been detected. Laboratory dependent list.
Atrazine	
Cis-1,2-Dichloroethylene	
Carbon Tetrachloride	
Chloroform	
Methylene chloride	

TABLE B-25 (Continued)

Parameter	Definition
M,P-Xylene	
O-Xylene	
Perchloroethylene	
Simazine	
Styrene	
Trans-1,2-Dichloroethylene	
Trichloroethylene	
Phenols	
Di-N-Butylphthalate	
Bis (2-Ethylhexyl) Phthalate	
Toluene	
Selenium	
Perchlorate	
Hydrazine	
4-Hydroxy-4-Methyl-2-Pentan	4-Hydroxy-4-Methyl-2-Pentanone
Acetone	
Xylidine	
Freon 113	
Thiourea	

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group parameters. A total of seven laboratories are identified in the data base. These laboratories and their abbreviations used in computer printouts from the data base are:

CDHS	-	California Department of Health Services
JMM LAB	-	Montgomery Laboratories
CAL	-	California Analytical
ERG	-	ERG
S3D	-	S-Cubed
PED	-	Pedco Environmental
CBRDG	-	Cambridge Laboratories

The CDHS entries are somewhat misleading. All data obtained from the files of the CDHS have been entered using the CDHS laboratory code regardless of the laboratory that actually performed the analysis. The results listed under this laboratory code should be recognized as representing any one of many laboratories which may have conducted the analysis. The JMM LAB code generally represents those analyses conducted for the AB 1803 program because all of the water samples collected by Stetson Engineers were analyzed by Montgomery Laboratories, Inc, in Pasadena, California. The remaining laboratories represent laboratories which are contracted to the U.S EPA. Results showing these laboratory codes represent water samples collected as a part of the SSP. Specific laboratory results transmitted to the U.S. EPA for inclusion in the data base are available for inspection at the U.S. EPA Region IX office in San Francisco, California.

The sample date represents the year, month and day in which the sample was collected in the field: it does not represent the day the sample was analyzed. The computerized data base has been designed to minimize data entry errors. One of the checks made during data entry is the date; therefore, multiple analyses for the same chemical constituent are not allowed for the same date. Unfortunately, this data entry check does not allow analysis results for duplicates, blanks, or analysis for the same chemical constituents by another laboratory on the same date, to be entered for a well. As a result the following have been applied when entering data into the data base:

- o Where duplicates have been taken, the higher value reported has been entered

- o Where analyses are available from several sources on the same date, the higher value has been selected for entry into the data base

- o Data obtained for the SSP has been entered in preference to data collected for other programs

The value reported is the concentration of the chemical constituent. This value is in the units of concentration identified by the units column. Generally, the units of concentration are milligrams per liter, abbreviated as MG/L or micrograms per liter, abbreviated as UG/L.

Data value flags have been inserted to qualify the reported concentration values. Three flags are defined currently, which are as follows:

L - The chemical constituent is below the data value reported, which is the laboratory detection limit

F - The concentration value reported by the laboratory has failed the quality control criteria due to contamination found in an associated blank sample (see explanation in Section B.2.2.4)

G - The chemical compound was analyzed for, but the laboratory analysis is now considered to be invalid after a quality assurance review of the analytical method was conducted

Table B-26 is a printout of water quality data compiled for groundwater samples collected from 1979 through the first half of 1985. The column headings correspond to those described in this subsection. Data for much of the groundwater contamination analyses conducted for the SSP is presented in this table. The table presents data according to TDM II well numbers which can be cross referenced with other well designations using Table B-23.

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B.4 REFERENCES

CH2M HILL, Draft Sampling Plan, San Gabriel Areas 1-4, Remedial Investigation, San Gabriel Basin, Los Angeles County, California, 1985a.

CH2M HILL, TDM II REM/FIT Technical Data Management, Version 1.3, unpublished, 1985b.

EPA, See U.S. Environmental Protection Agency

LACFCD, Los Angeles County Flood Control District, Well Data Card Listing, 1984.

Stetson Engineers, AB 1803 Water Analysis Plan for the Main San Gabriel Basin, 1984.

Stetson Engineers, Water Analysis Report on the AB 1803 Water Analysis Plan for the Main San Gabriel Basin, 1985.

U.S. Environmental Protection Agency, Laboratory Data Validation Functional Guidelines for Evaluating Organic Analyses, 1985.

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Table B-26

TDM II
TECHNICAL DATA MANAGEMENT SYSTEM

CHEMICAL ANALYSES BY LOCATION/PARAMETER REPORT — TDMII-004
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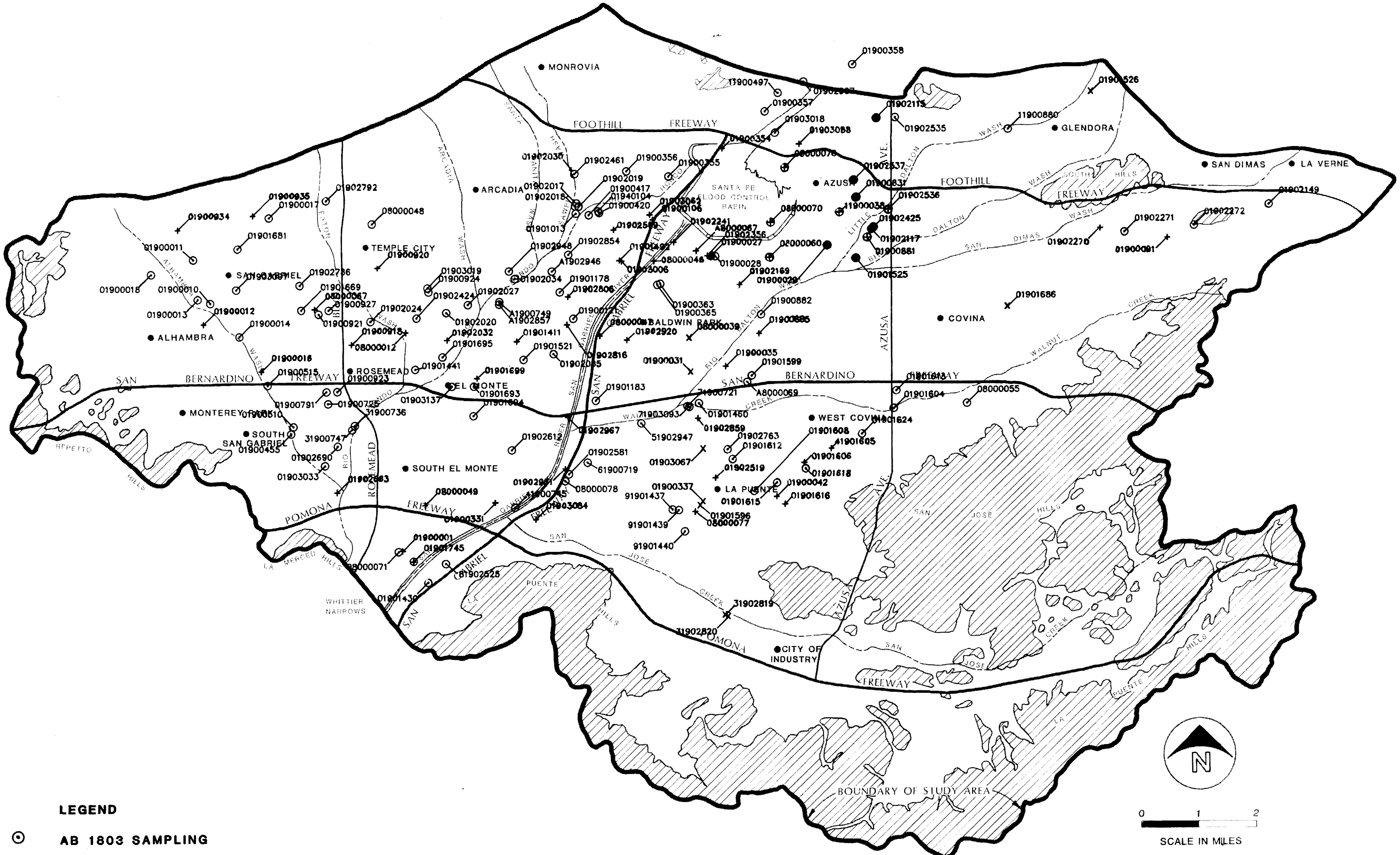
LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900001	EPA METHOD 624--COMPOUNDS D	S3D	85.05.08	0.0000	
	EPA METHOD 625--COMPOUNDS D	S3D	85.05.08	0.0000	
	PERCHLOROETHYLENE	CDHS	82.04.16	1.3100	UG/L
		S3D	85.05.08	1.4000	UG/L
	PHENOLS	S3D	85.05.08	3.0000	UG/L
	TRICHLOROETHYLENE	S3D	85.05.08	5.0000	UG/L
01900010	1,1-DICHLOROETHYLENE	CDHS	85.02.21	0.1000 L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.03	0.0000	
		JMM LAB	85.02.21	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000	
	PERCHLOROETHYLENE	CDHS	85.02.21	1.0000 L	UG/L
	TRICHLOROETHYLENE	CDHS	81.07.08	0.3800	UG/L
		CDHS	82.08.24	0.6900	UG/L
		JMM LAB	85.01.03	1.1000	UG/L
		JMM LAB	85.02.21	1.2000	UG/L
01900011	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.03	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000	
01900012	EPA METHOD 624--COMPOUNDS D	S3D	85.05.08	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.05.08	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.06.30	0.1700 L	UG/L
		CDHS	82.08.24	0.2800	UG/L
	PERCHLOROETHYLENE	CDHS	81.06.30	0.1000 L	UG/L
		CDHS	82.08.24	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	11.0000	UG/L
		CDHS	80.01.14	9.0000	UG/L
		CDHS	80.01.22	8.9000	UG/L
		CDHS	80.06.10	6.7000	UG/L
		CDHS	80.10.07	6.7000	UG/L
		CDHS	81.06.30	9.3000	UG/L
		CDHS	82.08.24	13.1000	UG/L
		S3D	85.05.08	9.0000	UG/L



LEGEND

- ⊙ AB 1803 SAMPLING
- × AB 1803 AND SSP-QA SAMPLING
- ⊕ SSP - SOURCE SAMPLING
- ● COMBINED SSP - QA AND SOURCE SAMPLING
- + SSP - GENERAL SAMPLING
- NONWATER-BEARING ROCK

FIGURE B-1
LOCATION OF WELLS SAMPLED FOR THE SSP AND AB 1803 PROGRAM
SAN GABRIEL SUPPLEMENTAL SAMPLING PROGR

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900013	1,1-DICHLOROETHYLENE	JMM LAB	85.02.21	1.2000	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.03	0.0000	
		JMM LAB	85.02.21	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000	
	CIS-1,2-DICHLOROETHYLENE	CDHS	85.03.21	0.6000 L	UG/L
	CARBON TETRACHLORIDE	CDHS	80.09.05	0.0600	UG/L
		CDHS	81.04.01	0.1300	UG/L
		CDHS	81.07.08	0.1000 L	UG/L
		CDHS	82.08.24	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.04.01	0.1000 L	UG/L
		CDHS	81.07.08	0.1000 L	UG/L
		CDHS	82.08.24	0.1000 L	UG/L
		CDHS	85.02.21	1.0000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	2.8000	UG/L
		CDHS	80.01.23	1.1000	UG/L
		CDHS	80.09.05	9.9000	UG/L
		CDHS	80.09.22	11.0000	UG/L
		CDHS	80.10.07	8.8000	UG/L
		CDHS	81.04.01	10.0000	UG/L
		CDHS	81.07.08	12.3000	UG/L
		CDHS	82.08.24	8.8200	UG/L
		JMM LAB	85.01.03	1.2000	UG/L
		JMM LAB	85.02.21	9.3000	UG/L
		CDHS	85.03.21	7.4000	UG/L
01900014	1,1-DICHLOROETHYLENE	CDHS	85.02.21	0.1000 L	UG/L
	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.03	0.0000	
		JMM LAB	85.02.21	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000	
	PERCHLOROETHYLENE	CDHS	85.02.21	1.0000 L	UG/L
	TRICHLOROETHYLENE	CDHS	85.02.21	1.0000 L	UG/L
01900015	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.03	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000	

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900015	TRICHLOROETHYLENE	CDHS	80.01.11	2.0000	L	UG/L
01900016	EPA METHOD 624--NO COMPOUND	S3D	85.05.08	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.05.08	0.0000		
01900017	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.03	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000		
01900018	1,1-DICHLOROETHYLENE	CDHS	85.02.21	0.1000	L	UG/L
	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.03	0.0000		
		JMM LAB	85.02.21	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000		
	CARBON TETRACHLORIDE	CDHS	80.04.01	0.1400		UG/L
		CDHS	80.09.05	0.0800		UG/L
		CDHS	81.04.01	0.1400		UG/L
	PERCHLOROETHYLENE	CDHS	80.02.14	0.0400		UG/L
		CDHS	80.09.05	0.0500	L	UG/L
		CDHS	81.04.01	0.1000	L	UG/L
		CDHS	82.08.24	0.3600		UG/L
		CDHS	83.02.16	0.1000	L	UG/L
		CDHS	85.02.21	0.1000	L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	9.0000		UG/L
		CDHS	80.01.22	7.0000		UG/L
		CDHS	80.02.14	3.5000		UG/L
		CDHS	80.04.01	9.4000		UG/L
		CDHS	80.07.29	4.6000		UG/L
		CDHS	80.08.26	7.5000		UG/L
		CDHS	80.09.05	6.3000		UG/L
		CDHS	80.09.24	16.0000		UG/L
		CDHS	80.10.07	8.8000		UG/L
		CDHS	80.12.23	1.0000	L	UG/L
		CDHS	81.04.01	9.4000		UG/L
		CDHS	82.08.24	11.0000		UG/L
		CDHS	82.11.09	7.9000		UG/L
		CDHS	82.11.16	2.3000		UG/L
		CDHS	82.11.23	7.8000		UG/L
		CDHS	82.11.30	6.7000		UG/L
		CDHS	82.12.07	1.3000		UG/L
		CDHS	82.12.14	8.7000		UG/L
		CDHS	82.12.21	6.9000		UG/L
		CDHS	82.12.28	7.9000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900018	TRICHLOROETHYLENE	CDHS	83.01.04	7.8000		UG/L
		CDHS	83.01.11	8.5000		UG/L
		CDHS	83.01.18	8.3000		UG/L
		CDHS	83.01.25	3.4000		UG/L
		CDHS	83.02.16	11.0000		UG/L
		CDHS	83.03.08	7.8000		UG/L
		CDHS	83.09.09	1.0000	L	UG/L
		CDHS	83.12.28	7.9000		UG/L
		CDHS	85.02.21	0.1000	L	UG/L
01900026	CARBON TETRACHLORIDE	CDHS	84.10.01	1.0000	L	UG/L
		CDHS	84.12.05	2.9000		UG/L
		CDHS	85.01.01	1.0000	L	UG/L
		CDHS	85.02.01	1.0000		UG/L
		CDHS	85.03.01	1.0000	L	UG/L
	PERCHLOROETHYLENE	CDHS	84.10.01	1.7000		UG/L
		CDHS	84.12.05	14.0000		UG/L
		CDHS	85.01.01	5.1000		UG/L
		CDHS	85.02.01	4.1000		UG/L
		CDHS	85.03.01	1.2000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0300		UG/L
		CDHS	84.10.01	1.4000		UG/L
		CDHS	84.12.05	6.2000		UG/L
		CDHS	85.01.01	1.9000		UG/L
		CDHS	85.02.01	2.8000		UG/L
		CDHS	85.03.01	1.0000	L	UG/L
01900027	EPA METHOD 624--NO COMPOUND	S3D	85.02.12	0.0000		
	EPA METHOD 625--NO COMPOUND	ERG	85.02.12	0.0000		
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.02.12	0.0000		
	FREON-113	S3D	85.02.12	5.0000	L	UG/L
	HYDRAZINE	CAL	85.02.12	1.0000	L	MG/L
	PERCHLOROETHYLENE	CDHS	80.06.18	0.0300		UG/L
	PERCHLORATE	CAL	85.02.12	0.0000	G	MG/L
	SELENIUM	S3D	85.02.12	4.2000	L	UG/L
	THIOUREA	FED	85.02.12	50.0000	L	UG/L
	XYLIDINE	ERG	85.02.12	25.0000	L	UG/L
01900028	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.12	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.12	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.12	0.0000		

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900028	PERCHLOROETHYLENE	CDHS	80.12.11	0.1000		UG/L
		JMM LAB	85.02.12	0.7000		UG/L
	PERCHLORATE	CAL	85.02.12	0.0000	G	MG/L
	TRICHLOROETHYLENE	CDHS	80.12.11	0.3700		UG/L
		JMM LAB	85.02.12	3.6000		UG/L
01900029	1,1-DICHLOROETHANE	JMM LAB	85.02.12	8.5000		UG/L
	1,1-DICHLOROETHYLENE	S3D	85.02.12	1.0000		UG/L
	1,2-DICHLOROETHANE	S3D	85.02.12	4.0000		UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.02.12	0.0000		
	EPA METHOD 625--NO COMPOUND	ERG	85.02.12	0.0000		
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.02.12	0.0000		
	CARBON TETRACHLORIDE	CDHS	82.08.11	13.0000		UG/L
		S3D	85.02.12	6.0000		UG/L
	CHLOROFORM	S3D	85.02.12	25.0000		UG/L
	FREON-113	S3D	85.02.12	5.0000	L	UG/L
	HYDRAZINE	CAL	85.02.12	1.0000	L	MG/L
	PERCHLOROETHYLENE	CDHS	80.02.28	41.0000		UG/L
		CDHS	80.03.10	14.0000		UG/L
		CDHS	80.04.08	5.1000		UG/L
		CDHS	82.08.11	58.0000		UG/L
		S3D	85.02.12	29.0000		UG/L
	SELENIUM	S3D	85.02.12	4.2000	L	UG/L
	TRANS-1,2-DICHLOROETHYLENE	S3D	85.02.12	10.0000		UG/L
	TRICHLOROETHYLENE	CDHS	79.12.26	560.0000		UG/L
		CDHS	79.12.27	540.0000		UG/L
		CDHS	80.01.03	600.0000		UG/L
		CDHS	80.01.05	570.0000		UG/L
		CDHS	80.01.14	341.0000		UG/L
		CDHS	80.01.23	230.0000		UG/L
		CDHS	80.02.28	600.0000		UG/L
		CDHS	80.03.10	770.0000		UG/L
		CDHS	80.04.08	703.0000		UG/L
		CDHS	82.08.11	625.0000		UG/L
		S3D	85.02.12	370.0000		UG/L
	THIOUREA	PED	85.02.12	50.0000	L	UG/L
	XYLIDINE	ERG	85.02.12	25.0000	L	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900031	EPA METHOD 624--COMPOUNDS D	S3D	85.02.12	0.0000	
	EPA METHOD 625--NO COMPOUND	ERG	85.02.12	0.0000	
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.02.12	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.08.21	7.4000	UG/L
		CDHS	80.09.05	7.4000	UG/L
		CDHS	81.01.13	3.0000	UG/L
		CDHS	81.03.18	5.0000	UG/L
		CDHS	81.07.13	7.0000	UG/L
		CDHS	81.08.12	7.0000	UG/L
		CDHS	82.04.22	8.0000	UG/L
		CDHS	83.04.08	8.7000	UG/L
		CDHS	83.06.06	9.0000	UG/L
		S3D	85.02.12	5.0000	UG/L
	FREON-113	S3D	85.02.12	5.0000 L	UG/L
	METHYLENE CHLORIDE	S3D	85.02.12	1.0000	UG/L
	PERCHLOROETHYLENE	CDHS	80.03.10	0.0400	UG/L
		CDHS	80.07.28	0.0400	UG/L
		CDHS	80.09.05	0.1000	UG/L
		CDHS	81.01.13	0.2800	UG/L
		CDHS	81.03.18	0.3300	UG/L
		CDHS	81.07.13	0.1000 L	UG/L
		JMM LAB	85.02.12	0.6000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.05	1.3000	UG/L
		CDHS	80.01.23	1.5000	UG/L
		CDHS	80.03.10	2.0000	UG/L
		CDHS	80.07.28	0.7000	UG/L
		CDHS	80.09.05	1.1000	UG/L
		CDHS	81.01.13	0.8800	UG/L
		CDHS	81.03.18	1.0000	UG/L
		CDHS	81.07.13	1.2000	UG/L
		CDHS	81.08.12	1.2000	UG/L
		CDHS	82.04.22	1.5000	UG/L
		CDHS	82.07.21	9.1000	UG/L
		CDHS	83.06.06	2.8000	UG/L
		JMM LAB	85.02.12	5.0000	UG/L
	XYLIDINE	ERG	85.02.12	25.0000 L	UG/L
01900032	PERCHLOROETHYLENE	CDHS	80.06.18	0.0300	UG/L
01900034	CARBON TETRACHLORIDE	CDHS	80.09.05	0.6800	UG/L
		CDHS	81.01.12	0.3500	UG/L
		CDHS	82.04.22	1.5000	UG/L
		CDHS	82.07.21	0.1000 L	UG/L
		CDHS	83.06.06	0.1000 L	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900034	PERCHLOROETHYLENE	CDHS	80.02.29	1.7000	UG/L
		CDHS	80.04.08	0.4800	UG/L
		CDHS	80.04.10	0.5200	UG/L
		CDHS	80.04.16	0.6600	UG/L
		CDHS	80.07.28	0.3900	UG/L
		CDHS	80.09.05	0.6000	UG/L
		CDHS	81.01.12	3.0000	UG/L
		CDHS	82.07.21	305.0000	UG/L
	TRICHLOROETHYLENE	CDHS	79.12.26	7.1000	UG/L
		CDHS	80.01.05	11.0000	UG/L
		CDHS	80.01.09	15.0000	UG/L
		CDHS	80.01.14	15.0000	UG/L
		CDHS	80.02.29	8.6000	UG/L
		CDHS	80.04.08	0.9900	UG/L
		CDHS	80.04.10	1.7000	UG/L
		CDHS	80.04.16	1.5000	UG/L
		CDHS	80.07.28	1.1000	UG/L
		CDHS	80.08.18	1.4000	UG/L
		CDHS	80.09.05	1.4000	UG/L
		CDHS	81.01.12	9.5000	UG/L
		CDHS	82.04.22	390.0000	UG/L
		CDHS	82.07.21	700.0000	UG/L
		CDHS	83.03.04	14.4000	UG/L
		CDHS	83.03.07	190.0000	UG/L
		CDHS	83.06.01	47.0000	UG/L
		CDHS	83.06.02	66.4000	UG/L
		CDHS	83.06.06	4.8000	UG/L
01900035	1,1-DICHLOROETHYLENE	S3D	85.04.17	1.3000	UG/L
	1,2-DICHLOROETHANE	S3D	85.04.17	8.0000	UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.04.17	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.04.17	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.08.21	6.4000	UG/L
		CDHS	80.09.05	6.1000	UG/L
		CDHS	81.03.18	7.7000	UG/L
		CDHS	82.04.22	8.5000	UG/L
		CDHS	82.09.08	8.2000	UG/L
		S3D	85.04.17	7.6000	UG/L
	CHLOROFORM	S3D	85.04.17	4.5000	UG/L
	FREON-113	S3D	85.04.17	1.0000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.03.10	0.0700	UG/L
		CDHS	80.04.08	0.0500	UG/L
		CDHS	80.04.10	0.1000	UG/L
		CDHS	80.04.16	0.0800	UG/L
		CDHS	80.07.28	0.0600	UG/L
		CDHS	80.09.05	0.1200	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900035	PERCHLOROETHYLENE	CDHS	81.03.18	0.1900		UG/L
		S3D	85.04.17	4.8000		UG/L
	TRANS-1,2-DICHLOROETHYLENE	S3D	85.04.17	4.1000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.05	46.0000		UG/L
		CDHS	80.01.09	67.0000		UG/L
		CDHS	80.01.14	53.2000		UG/L
		CDHS	80.03.10	21.0000		UG/L
		CDHS	80.04.08	13.0000		UG/L
		CDHS	80.04.10	26.0000		UG/L
		CDHS	80.04.16	20.0000		UG/L
		CDHS	80.07.28	19.9000		UG/L
		CDHS	80.08.18	21.0000		UG/L
		CDHS	80.09.05	22.0000		UG/L
		CDHS	81.03.18	45.0000		UG/L
		CDHS	81.07.31	34.0000		UG/L
		CDHS	82.04.22	55.0000		UG/L
		CDHS	82.09.08	82.0000		UG/L
		CDHS	83.06.23	2.2000		UG/L
		S3D	85.04.17	130.0000		UG/L
	XYLIDINE	S3D	85.04.17	50.0000	L	UG/L
01900042	EPA METHOD 624--NO COMPOUND	S3D	85.05.08	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.05.08	0.0000		
	TRICHLOROETHYLENE	CDHS	80.01.15	0.0200		UG/L
01900052	1,1,1-TRICHLOROETHANE	CDHS	85.04.30	3.9000		UG/L
		CDHS	85.05.08	7.5000		UG/L
	1,1-DICHLOROETHANE	CDHS	85.04.30	0.9000	L	UG/L
		CDHS	85.05.08	1.1000	L	UG/L
	1,1-DICHLOROETHYLENE	CDHS	85.04.30	1.9000	L	UG/L
		CDHS	85.05.08	2.7000	L	UG/L
	CIS-1,2-DICHLOROETHYLENE	CDHS	85.04.30	14.0000		UG/L
		CDHS	85.05.08	28.0000		UG/L
	PERCHLOROETHYLENE	CDHS	85.04.30	3.8000		UG/L
		CDHS	85.05.08	7.4000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.1300		UG/L
		CDHS	85.04.30	11.0000		UG/L
		CDHS	85.05.08	21.0000		UG/L
01900091	1,1,1-TRICHLOROETHANE	S3D	85.05.13	17.0000		UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.05.13	0.0000		

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900091	EPA METHOD 625--COMPOUNDS D	S3D	85.05.13	0.0000		
	BIS(2-ETHYLHEXYL)PHTHALATE	S3D	85.05.13	2.0000		UG/L
01900094	1,1,1-TRICHLOROETHANE	CDHS	85.04.30	4.2000		UG/L
	1,1-DICHLOROETHANE	CDHS	85.04.30	1.7000	L	UG/L
		CDHS	85.05.08	0.4200	L	UG/L
	1,1-DICHLOROETHYLENE	CDHS	85.04.30	0.5000	L	UG/L
		CDHS	85.05.08	0.6200	L	UG/L
	CIS-1,2-DICHLOROETHYLENE	CDHS	85.04.30	2.6000		UG/L
		CDHS	85.05.08	2.6000		UG/L
	PERCHLOROETHYLENE	CDHS	85.04.30	1.7000		UG/L
		CDHS	85.05.08	1.7000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0400		UG/L
		CDHS	85.04.30	2.8000		UG/L
		CDHS	85.05.08	3.0000		UG/L
01900106	EPA METHOD 624--NO COMPOUND	S3D	85.04.25	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.25	0.0000		
	TRICHLOROETHYLENE	S3D	85.04.25	1.0000	L	UG/L
01900117	TRICHLOROETHYLENE	CDHS	79.12.27	520.0000		UG/L
		CDHS	80.01.08	100.0000		UG/L
01900120	CARBON TETRACHLORIDE	CDHS	80.10.31	0.1000	L	UG/L
		CDHS	80.11.14	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.10.31	14.0000		UG/L
		CDHS	80.11.14	16.0000		UG/L
		CDHS	81.01.07	9.8000		UG/L
		CDHS	81.01.12	9.8000		UG/L
		CDHS	81.02.19	8.2000		UG/L
		CDHS	81.06.17	6.5000		UG/L
		CDHS	81.07.15	7.5000		UG/L
		CDHS	81.07.23	8.3000		UG/L
		CDHS	81.08.12	7.0000		UG/L
		CDHS	81.09.16	11.0000		UG/L
		CDHS	81.10.14	15.0000		UG/L
		CDHS	81.11.18	11.0000		UG/L
		CDHS	81.12.08	5.5000		UG/L
		CDHS	81.12.18	9.2000		UG/L
		CDHS	82.01.20	6.9000		UG/L
		CDHS	82.02.19	4.2000		UG/L
		CDHS	82.03.11	6.7000		UG/L
		CDHS	82.03.16	4.1000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900120	PERCHLOROETHYLENE	CDHS	82.05.12	3.3000	UG/L
		CDHS	82.06.08	4.4000	UG/L
		CDHS	82.06.17	7.3000	UG/L
		CDHS	82.06.18	4.3000	UG/L
		CDHS	82.06.23	4.0000	UG/L
		CDHS	82.06.30	4.4000	UG/L
		CDHS	82.07.07	4.7000	UG/L
		CDHS	82.07.14	6.1000	UG/L
		CDHS	82.07.23	4.6900	UG/L
		CDHS	82.08.05	6.3000	UG/L
		CDHS	82.08.17	6.4000	UG/L
		CDHS	82.09.22	3.7000	UG/L
		CDHS	82.09.30	5.9000	UG/L
		CDHS	82.10.27	1.8000	UG/L
		CDHS	82.11.22	0.4300	UG/L
		CDHS	82.12.22	0.2200	UG/L
		CDHS	82.12.29	0.2900	UG/L
		CDHS	83.02.16	0.3100	UG/L
		CDHS	83.04.07	1.8000	UG/L
		CDHS	83.05.17	1.7000	UG/L
		CDHS	83.08.17	2.4000	UG/L
		CDHS	83.09.28	1.3000	UG/L
		CDHS	84.01.10	1.0000	UG/L
		CDHS	84.01.12′	0.1000 L	UG/L
		CDHS	84.11.13	1.3000	UG/L
		CDHS	84.11.27	1.7000	UG/L
		CDHS	85.04.15	0.5000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.10.31	0.1000 L	UG/L
		CDHS	80.11.14	0.1000 L	UG/L
		CDHS	81.01.07	0.1400	UG/L
		CDHS	81.01.12	0.1000 L	UG/L
		CDHS	81.08.12	0.1000 L	UG/L
		CDHS	81.12.08	0.1000 L	UG/L
		CDHS	82.02.19	0.2000	UG/L
01900121	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.31	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.31	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.31	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.10.31	0.1000 L	UG/L
		CDHS	80.11.14	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.10.31	15.0000	UG/L
		CDHS	80.11.14	20.0000	UG/L
		CDHS	81.01.07	18.0000	UG/L
		CDHS	81.01.12	19.0000	UG/L
		CDHS	81.02.19	24.3000	UG/L
		CDHS	81.06.17	11.0000	UG/L
		CDHS	81.07.15	18.0000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900121	PERCHLOROETHYLENE	CDHS	81.07.23	19.0000	UG/L
		CDHS	81.08.12	7.3000	UG/L
		CDHS	81.09.16	11.0000	UG/L
		CDHS	81.10.14	16.0000	UG/L
		CDHS	81.11.18	11.0000	UG/L
		CDHS	81.12.08	11.0000	UG/L
		CDHS	81.12.18	19.0000	UG/L
		CDHS	82.01.20	25.4000	UG/L
		CDHS	82.02.09	18.2000	UG/L
		CDHS	82.04.08	36.0000	UG/L
		CDHS	82.06.08	36.0000	UG/L
		CDHS	82.06.18	38.0000	UG/L
		CDHS	82.06.23	32.7000	UG/L
		CDHS	82.06.30	33.4000	UG/L
		CDHS	82.07.07	40.0000	UG/L
		CDHS	82.07.23	35.7600	UG/L
		CDHS	82.08.05	43.0000	UG/L
		CDHS	82.08.17	54.1000	UG/L
		CDHS	82.09.30	45.0000	UG/L
		CDHS	82.10.27	24.0000	UG/L
		CDHS	82.11.22	12.0000	UG/L
		CDHS	82.12.22	2.5000	UG/L
		CDHS	82.12.29	4.2000	UG/L
		CDHS	83.04.07	8.3000	UG/L
		CDHS	83.05.17	3.7000	UG/L
		CDHS	83.08.17	1.6000	UG/L
		CDHS	83.09.15	0.1400	UG/L
		CDHS	83.09.28	2.7000	UG/L
		CDHS	84.01.10	2.1000	UG/L
		CDHS	84.01.12	1.3000	UG/L
		CDHS	84.11.27	6.6000	UG/L
		JMM LAB	85.01.31	4.4000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	1.4000	UG/L
		CDHS	80.10.31	0.1000 L	UG/L
		CDHS	80.11.14	0.1000 L	UG/L
		CDHS	81.01.07	0.0800	UG/L
		CDHS	81.01.12	0.1000 L	UG/L
		CDHS	81.08.12	0.1000 L	UG/L
		CDHS	81.12.08	0.1000 L	UG/L
		CDHS	82.02.09	0.1000	UG/L
01900331	EPA METHOD 624--COMPOUNDS D	S3D	85.05.14	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.05.14	0.0000	
	PERCHLOROETHYLENE	CDHS	82.04.16	0.1100	UG/L
		S3D	85.05.14	24.0000	UG/L
	TRICHLOROETHYLENE	S3D	85.05.14	5.0000	UG/L
01900332	PERCHLOROETHYLENE	CDHS	82.04.16	0.9600	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900337	1,1-DICHLOROETHANE	JMM LAB	85.03.19	0.1000		UG/L
	1,1-DICHLOROETHYLENE	JMM LAB	85.03.19	0.7000		UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.03.19	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.19	0.0000		
	EPA METHOD 625--COMPOUNDS D	ERG	85.03.19	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.19	0.0000		
	BIS(2-ETHYLHEXYL)PHTHALATE	ERG	85.03.19	18.0000		UG/L
	CARBON TETRACHLORIDE	CDHS	80.09.10	0.0500	L	UG/L
		CDHS	81.01.15	0.1000	L	UG/L
		CDHS	81.09.02	0.1000	L	UG/L
		CDHS	82.07.20	0.1000	L	UG/L
		CDHS	82.07.30	0.5000	L	UG/L
	CHLOROFORM	JMM LAB	85.03.19	0.4000		UG/L
	FREON-113	S3D	85.03.19	5.0000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.08.06	0.0300		UG/L
		CDHS	81.01.15	0.1000	L	UG/L
		CDHS	81.09.02	0.1000	L	UG/L
		CDHS	82.07.20	0.2200		UG/L
		CDHS	82.07.30	0.5000	L	UG/L
		CDHS	82.11.02	0.8000		UG/L
		JMM LAB	85.03.19	0.3000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.16	1.3000		UG/L
		CDHS	80.01.23	1.5000		UG/L
		CDHS	80.02.29	2.0000		UG/L
		CDHS	80.03.04	1.5000		UG/L
		CDHS	80.08.05	3.1000		UG/L
		CDHS	80.08.06	3.1000		UG/L
		CDHS	80.09.10	1.5000		UG/L
		CDHS	81.01.15	2.9000		UG/L
		CDHS	81.07.22	9.0000		UG/L
		CDHS	81.09.02	4.3000		UG/L
		CDHS	81.12.14	5.7000		UG/L
		CDHS	82.07.16	7.2000		UG/L
		CDHS	82.07.20	6.2700		UG/L
		CDHS	82.07.30	9.4000		UG/L
		CDHS	82.08.09	9.0200		UG/L
		CDHS	82.08.16	7.7300		UG/L
		CDHS	82.08.25	11.3000		UG/L
		CDHS	82.09.20	7.2000		UG/L
		CDHS	82.11.02	12.8000		UG/L
		CDHS	83.02.09	10.4000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900337	TRICHLOROETHYLENE	CDHS	83.05.27	8.9000		UG/L
		CDHS	83.06.15	15.0000		UG/L
		S3D	85.03.19	8.0000		UG/L
	XYLIDINE	ERG	85.03.19	25.0000	L	UG/L
01900354	EPA METHOD 624--COMPOUNDS D	S3D	85.04.30	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.30	0.0000		
	CARBON TETRACHLORIDE	CDHS	82.08.19	0.1000	L	UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.04.30	10.0000	F	UG/L
	METHYLENE CHLORIDE	S3D	85.04.30	2.1000	F	UG/L
	PERCHLOROETHYLENE	CDHS	81.08.28	0.9200		UG/L
		CDHS	82.08.19	0.1000	L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.09	0.0400		UG/L
		CDHS	81.08.28	0.3200		UG/L
		CDHS	81.09.04	0.1100		UG/L
		CDHS	82.08.19	0.1400		UG/L
		S3D	85.04.30	1.0000		UG/L
01900355	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.07	0.0000		
01900356	1,1,1-TRICHLOROETHANE	JMM LAB	85.02.07	0.6000		UG/L
		JMM LAB	85.04.25	7.2000		UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.07	0.0000		
		JMM LAB	85.04.25	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.07	0.0000		
	CARBON TETRACHLORIDE	CDHS	81.08.28	0.1000	L	UG/L
	CHLOROFORM	CDHS	82.08.19	12.0000		UG/L
		CDHS	83.06.06	0.1000	L	UG/L
		JMM LAB	85.04.25	7.9000		UG/L
	METHYLENE CHLORIDE	JMM LAB	85.04.25	3.7000		UG/L
	PERCHLOROETHYLENE	CDHS	81.08.28	0.8900		UG/L
		CDHS	82.08.19	1.0000		UG/L
		JMM LAB	85.02.07	0.3000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900356	PERCHLOROETHYLENE	JMM LAB	85.04.25	0.7000		UG/L
	TRANS-1,2-DICHLOROETHYLENE	JMM LAB	85.04.25	1.5000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	0.7900		UG/L
		CDHS	80.01.23	0.8900		UG/L
		CDHS	81.08.28	5.5000		UG/L
		CDHS	81.09.04	3.2000		UG/L
		CDHS	82.07.29	17.0000		UG/L
		CDHS	82.08.19	9.4000		UG/L
		CDHS	82.08.26	13.0000		UG/L
		CDHS	82.09.15	10.8000		UG/L
		CDHS	82.09.24	12.0000		UG/L
		CDHS	83.06.06	0.1000	L	UG/L
		CDHS	83.06.14	0.1000	L	UG/L
		JMM LAB	85.02.07	1.6000		UG/L
		JMM LAB	85.04.25	7.7000		UG/L
01900357	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.07	0.0000		
01900358	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.07	0.0000		
01900363	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.12	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.12	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.12	0.0000		
	PERCHLOROETHYLENE	CDHS	80.03.11	0.0400		UG/L
		CDHS	80.08.04	0.0300		UG/L
		CDHS	80.10.10	0.1200		UG/L
	TRICHLOROETHYLENE	CDHS	80.03.11	0.0300		UG/L
01900364	PERCHLOROETHYLENE	CDHS	80.03.04	0.0400		UG/L
	TRICHLOROETHYLENE	CDHS	80.03.04	0.4000		UG/L
01900365	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.12	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.12	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.12	0.0000		

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900365	TRICHLOROETHYLENE	CDHS	80.01.07	1.3000		UG/L
01900417	1,1-DICHLOROETHYLENE	CDHS	85.02.14	0.1000	L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.14	0.0000		
		JMM LAB	85.04.25	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.14	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.14	0.0000		
	CARBON TETRACHLORIDE	CDHS	80.08.29	0.0500	L	UG/L
	CHLOROFORM	JMM LAB	85.02.14	1.0000		UG/L
		JMM LAB	85.04.25	1.7000		UG/L
	PERCHLOROETHYLENE	CDHS	80.02.20	2.3000		UG/L
		CDHS	80.04.28	0.2600		UG/L
		CDHS	80.08.29	1.8000		UG/L
		CDHS	81.03.18	3.9000		UG/L
		CDHS	81.04.06	3.5000		UG/L
		CDHS	81.07.07	1.2000		UG/L
		CDHS	81.08.04	1.6000		UG/L
		CDHS	81.08.31	1.0000		UG/L
		CDHS	81.10.05	0.8200		UG/L
		CDHS	81.11.02	1.4000		UG/L
		CDHS	81.11.30	1.0000		UG/L
		CDHS	82.01.04	1.1000		UG/L
		CDHS	82.02.01	0.9000		UG/L
		CDHS	82.03.01	1.2000		UG/L
		CDHS	82.04.05	1.1000		UG/L
		CDHS	82.05.03	1.1000		UG/L
		CDHS	82.06.01	1.8000		UG/L
		CDHS	82.07.05	2.7000		UG/L
		CDHS	82.08.02	1.5000		UG/L
		CDHS	82.09.01	1.4000		UG/L
		CDHS	82.10.04	2.0000		UG/L
		CDHS	82.11.01	1.4000		UG/L
		CDHS	82.11.29	0.9000		UG/L
		CDHS	82.12.01	0.9000		UG/L
		CDHS	83.01.03	0.4600		UG/L
		CDHS	83.01.31	0.4000		UG/L
		CDHS	83.02.28	0.1900		UG/L
		CDHS	83.04.05	0.2000		UG/L
		CDHS	83.05.02	0.3000		UG/L
		CDHS	83.06.01	0.2000		UG/L
		CDHS	83.07.01	0.2000		UG/L
		CDHS	83.08.01	0.3000		UG/L
		CDHS	83.09.01	0.1000		UG/L
		CDHS	83.10.01	0.4000		UG/L
		CDHS	83.11.01	0.3000		UG/L
		CDHS	83.12.01	0.2000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900417	PERCHLOROETHYLENE	CDHS	84.01.01	0.6000	UG/L
		CDHS	84.02.01	0.3000	UG/L
		CDHS	84.03.01	0.7000	UG/L
		CDHS	84.04.01	0.8000	UG/L
		CDHS	84.05.01	1.1000	UG/L
		CDHS	84.06.01	0.9000	UG/L
		CDHS	84.08.01	0.9000	UG/L
		CDHS	84.09.01	0.4500	UG/L
		CDHS	84.10.01	0.3000	UG/L
		CDHS	84.11.01	0.2000	UG/L
		CDHS	84.12.01	0.4000	UG/L
		CDHS	85.01.01	0.2000	UG/L
		CDHS	85.02.01	0.2500	UG/L
		JMM LAB	85.02.14	0.3000	UG/L
		CDHS	85.03.01	0.3500	UG/L
		JMM LAB	85.04.25	0.6000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	15.0000	UG/L
		CDHS	80.01.14	24.0000	UG/L
		CDHS	80.02.20	13.0000	UG/L
		CDHS	80.03.26	4.0000	UG/L
		CDHS	80.03.28	2.2000	UG/L
		CDHS	80.03.31	2.1000	UG/L
		CDHS	80.04.01	2.4000	UG/L
		CDHS	80.04.02	1.1000	UG/L
		CDHS	80.04.22	0.1500	UG/L
		CDHS	80.04.23	0.2500	UG/L
		CDHS	80.04.28	1.1000	UG/L
		CDHS	80.08.12	5.4000	UG/L
		CDHS	80.08.14	2.5000	UG/L
		CDHS	80.08.29	17.0000	UG/L
		CDHS	80.09.03	12.0000	UG/L
		CDHS	80.10.01	17.5000	UG/L
		CDHS	80.11.05	16.0000	UG/L
		CDHS	80.12.03	18.6000	UG/L
		CDHS	81.01.06	18.0000	UG/L
		CDHS	81.02.03	16.0000	UG/L
		CDHS	81.03.03	18.0000	UG/L
		CDHS	81.03.18	17.0000	UG/L
		CDHS	81.04.06	18.0000	UG/L
		CDHS	81.07.07	14.0000	UG/L
		CDHS	81.08.04	16.0000	UG/L
		CDHS	81.08.31	10.9000	UG/L
		CDHS	81.10.05	8.2000	UG/L
		CDHS	81.11.02	8.6000	UG/L
		CDHS	81.11.30	11.0000	UG/L
		CDHS	82.01.04	9.3000	UG/L
		CDHS	82.02.01	6.1000	UG/L
		CDHS	82.03.01	7.5000	UG/L
		CDHS	82.04.05	3.0000	UG/L
		CDHS	82.05.03	4.0000	UG/L
		CDHS	82.06.01	9.5000	UG/L

TDM II
TECHNICAL DATA MANAGEMENT SYSTEM

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900417	TRICHLOROETHYLENE	CDHS	82.07.05	15.1000		UG/L
		CDHS	82.08.02	13.0000		UG/L
		CDHS	82.09.01	11.4000		UG/L
		CDHS	82.10.04	17.5000		UG/L
		CDHS	82.11.01	14.6000		UG/L
		CDHS	82.11.29	4.4000		UG/L
		CDHS	82.12.01	4.4000		UG/L
		CDHS	83.01.03	0.3300		UG/L
		CDHS	83.01.31	0.6000		UG/L
		CDHS	83.02.28	0.2000		UG/L
		CDHS	83.04.05	0.1000		UG/L
		CDHS	83.05.02	0.1000	L	UG/L
		CDHS	83.06.01	0.1000	L	UG/L
		CDHS	83.07.01	0.1000	L	UG/L
		CDHS	83.08.01	0.2000		UG/L
		CDHS	83.09.01	0.5000		UG/L
		CDHS	83.10.01	1.2000		UG/L
		CDHS	83.11.01	0.7000		UG/L
		CDHS	83.12.01	0.8000		UG/L
		CDHS	84.01.01	2.1000		UG/L
		CDHS	84.02.01	2.8000		UG/L
		CDHS	84.03.01	3.2000		UG/L
		CDHS	84.04.01	3.7000		UG/L
		CDHS	84.05.01	5.3000		UG/L
		CDHS	84.06.01	5.4000		UG/L
		CDHS	84.08.01	8.0000		UG/L
		CDHS	84.09.01	2.5000		UG/L
		CDHS	84.10.01	1.0000		UG/L
		CDHS	84.11.01	0.5000		UG/L
		CDHS	84.12.01	0.7500		UG/L
		CDHS	85.01.01	0.5000		UG/L
		CDHS	85.02.01	0.1800		UG/L
		JMM LAB	85.02.14	0.7000		UG/L
		CDHS	85.03.01	1.1000		UG/L
		JMM LAB	85.04.25	1.5000		UG/L
01900418	CARBON TETRACHLORIDE	CDHS	80.08.29	0.0500	L	UG/L
		CDHS	81.03.18	0.1000	L	UG/L
		CDHS	81.05.04	0.2000		UG/L
		CDHS	82.08.19	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.20	2.8000		UG/L
		CDHS	80.08.29	5.6000		UG/L
		CDHS	81.03.18	9.9000		UG/L
		CDHS	81.04.06	6.5000		UG/L
		CDHS	81.05.04	7.7000		UG/L
		CDHS	81.06.02	5.4000		UG/L
		CDHS	81.07.07	5.7000		UG/L
		CDHS	81.08.04	6.7000		UG/L
		CDHS	81.08.31	4.5000		UG/L
		CDHS	81.10.05	3.1000		UG/L
		CDHS	81.11.02	5.2000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900418	PERCHLOROETHYLENE	CDHS	81.11.30	4.3000		UG/L
		CDHS	82.01.04	4.5000		UG/L
		CDHS	82.02.01	2.8000		UG/L
		CDHS	82.03.01	2.1000		UG/L
		CDHS	82.04.05	1.8000		UG/L
		CDHS	82.04.23	5.2000		UG/L
		CDHS	82.05.03	3.9000		UG/L
		CDHS	82.06.01	7.1000		UG/L
		CDHS	82.07.05	6.7000		UG/L
		CDHS	82.08.02	6.6000		UG/L
		CDHS	82.08.11	11.0000		UG/L
		CDHS	82.08.19	6.3000		UG/L
		CDHS	82.09.01	5.6000		UG/L
		CDHS	82.10.04	4.3000		UG/L
		CDHS	82.11.01	4.9000		UG/L
		CDHS	82.11.29	4.4000		UG/L
		CDHS	82.12.01	4.4000		UG/L
		CDHS	83.01.03	4.4000		UG/L
		CDHS	83.01.31	2.0000		UG/L
		CDHS	83.02.28	1.9000		UG/L
		CDHS	83.04.01	0.6000		UG/L
		CDHS	83.05.03	0.6000		UG/L
		CDHS	83.06.01	1.1000		UG/L
		CDHS	83.07.01	0.2000		UG/L
		CDHS	83.08.01	1.0000		UG/L
		CDHS	83.09.01	0.9000		UG/L
		CDHS	83.10.01	0.7000		UG/L
		CDHS	83.11.01	0.7000		UG/L
		CDHS	84.02.01	0.1000	L	UG/L
		CDHS	84.03.01	0.1000	L	UG/L
		CDHS	84.06.01	0.1000	L	UG/L
		CDHS	84.08.01	2.1000		UG/L
		CDHS	84.09.01	1.0000		UG/L
		CDHS	84.10.01	1.6000		UG/L
		CDHS	84.11.01	1.3000		UG/L
		CDHS	84.12.01	2.0000		UG/L
		CDHS	85.01.01	2.0000		UG/L
		CDHS	85.02.01	0.9000		UG/L
		CDHS	85.03.01	1.5000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	63.0000		UG/L
		CDHS	80.01.14	44.0000		UG/L
		CDHS	80.02.20	14.0000		UG/L
		CDHS	80.05.02	2.1800		UG/L
		CDHS	80.05.05	2.8200		UG/L
		CDHS	80.05.06	2.7000		UG/L
		CDHS	80.05.07	3.1000		UG/L
		CDHS	80.05.08	0.9000		UG/L
		CDHS	80.05.09	2.3400		UG/L
		CDHS	80.05.12	2.9400		UG/L
		CDHS	80.08.12	18.0000		UG/L
		CDHS	80.08.14	26.0000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900418	TRICHLOROETHYLENE	CDHS	80.08.19	68.0000	UG/L
		CDHS	80.08.20	92.0000	UG/L
		CDHS	80.08.29	51.0000	UG/L
		CDHS	80.09.03	67.9000	UG/L
		CDHS	80.10.01	67.9000	UG/L
		CDHS	80.11.05	77.1000	UG/L
		CDHS	80.12.03	67.6000	UG/L
		CDHS	81.01.06	63.0000	UG/L
		CDHS	81.02.03	71.0000	UG/L
		CDHS	81.03.03	47.0000	UG/L
		CDHS	81.03.18	85.0000	UG/L
		CDHS	81.04.06	50.0000	UG/L
		CDHS	81.05.04	60.0000	UG/L
		CDHS	81.06.02	72.0000	UG/L
		CDHS	81.07.07	57.0000	UG/L
		CDHS	81.08.04	66.0000	UG/L
		CDHS	81.08.31	54.3000	UG/L
		CDHS	81.10.05	38.5000	UG/L
		CDHS	81.11.02	50.7000	UG/L
		CDHS	81.11.30	50.0000	UG/L
		CDHS	82.01.04	50.0000	UG/L
		CDHS	82.02.01	37.7000	UG/L
		CDHS	82.03.01	26.3000	UG/L
		CDHS	82.04.05	20.7000	UG/L
		CDHS	82.04.23	36.8000	UG/L
		CDHS	82.05.03	28.0000	UG/L
		CDHS	82.06.01	51.2000	UG/L
		CDHS	82.07.05	66.4000	UG/L
		CDHS	82.08.02	77.4000	UG/L
		CDHS	82.08.11	167.0000	UG/L
		CDHS	82.08.19	94.0000	UG/L
		CDHS	82.09.01	55.2000	UG/L
		CDHS	82.10.04	47.9000	UG/L
		CDHS	82.11.01	53.1000	UG/L
		CDHS	82.11.29	59.9000	UG/L
		CDHS	82.12.01	59.9000	UG/L
		CDHS	83.01.03	24.5000	UG/L
		CDHS	83.01.31	18.7000	UG/L
		CDHS	83.02.28	16.9000	UG/L
		CDHS	83.04.01	5.0000	UG/L
		CDHS	83.05.03	2.7000	UG/L
		CDHS	83.06.01	5.1000	UG/L
		CDHS	83.07.01	1.0000	UG/L
		CDHS	83.08.01	6.8000	UG/L
		CDHS	83.09.01	4.5000	UG/L
		CDHS	83.10.01	3.2000	UG/L
		CDHS	83.11.01	4.4000	UG/L
		CDHS	84.02.01	0.1000 L	UG/L
		CDHS	84.03.01	0.1000 L	UG/L
		CDHS	84.06.01	0.1000 L	UG/L
		CDHS	84.08.01	21.3000	UG/L
		CDHS	84.09.01	8.5000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900418	TRICHLOROETHYLENE	CDHS	84.10.01	13.5000		UG/L
		CDHS	84.11.01	9.3000		UG/L
		CDHS	84.12.01	10.2000		UG/L
		CDHS	85.01.01	11.5000		UG/L
		CDHS	85.02.01	6.1000		UG/L
		CDHS	85.03.01	12.6000		UG/L
01900419	CARBON TETRACHLORIDE	CDHS	80.08.29	0.0500	L	UG/L
		CDHS	81.03.18	0.1000	L	UG/L
		CDHS	81.05.04	0.0500	L	UG/L
		CDHS	82.08.19	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.20	0.7700		UG/L
		CDHS	80.04.28	0.1500		UG/L
		CDHS	80.08.29	0.7200		UG/L
		CDHS	81.03.18	1.5000		UG/L
		CDHS	81.04.06	1.1000		UG/L
		CDHS	81.05.04	1.2000		UG/L
		CDHS	81.06.02	0.6000		UG/L
		CDHS	81.07.07	1.1000		UG/L
		CDHS	81.08.04	1.0000		UG/L
		CDHS	81.09.01	0.6000		UG/L
		CDHS	81.10.06	0.5800		UG/L
		CDHS	81.11.03	1.1000		UG/L
		CDHS	81.12.01	0.8000		UG/L
		CDHS	82.01.05	0.8000		UG/L
		CDHS	82.02.02	0.7000		UG/L
		CDHS	82.03.01	0.7000		UG/L
		CDHS	82.04.06	0.4000		UG/L
		CDHS	82.05.04	0.6000		UG/L
		CDHS	82.06.01	0.6000		UG/L
		CDHS	82.07.05	1.2000		UG/L
		CDHS	82.08.02	1.2000		UG/L
		CDHS	82.08.11	1.7000		UG/L
		CDHS	82.08.19	0.7400		UG/L
		CDHS	82.09.01	1.0000		UG/L
		CDHS	82.10.05	0.8000		UG/L
		CDHS	82.11.01	1.2000		UG/L
		CDHS	82.11.29	0.5000		UG/L
		CDHS	82.12.01	0.5000		UG/L
		CDHS	83.01.04	0.6000		UG/L
		CDHS	83.02.01	0.3000		UG/L
		CDHS	83.03.02	0.3000		UG/L
		CDHS	83.05.04	0.1000		UG/L
		CDHS	83.06.01	0.2000		UG/L
		CDHS	83.07.01	0.1000		UG/L
		CDHS	83.08.01	0.2000		UG/L
		CDHS	83.09.01	0.3000		UG/L
		CDHS	83.10.01	0.4000		UG/L
		CDHS	83.11.01	0.3000		UG/L
		CDHS	83.12.01	0.3000		UG/L
		CDHS	84.01.01	0.3000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900419	PERCHLOROETHYLENE	CDHS	84.02.01	0.1000	L	UG/L
		CDHS	84.03.01	0.4000		UG/L
		CDHS	84.04.01	0.5000		UG/L
		CDHS	84.05.01	0.5000		UG/L
		CDHS	84.06.01	0.5000		UG/L
		CDHS	84.08.01	0.4000		UG/L
		CDHS	84.09.01	0.4000		UG/L
		CDHS	84.10.01	0.3000		UG/L
		CDHS	84.11.01	0.3000		UG/L
		CDHS	84.12.01	0.5000		UG/L
		CDHS	85.01.01	0.3000		UG/L
		CDHS	85.02.01	0.3000		UG/L
		CDHS	85.03.01	0.4000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	6.4000		UG/L
		CDHS	80.01.14	9.2000		UG/L
		CDHS	80.01.22	5.8000		UG/L
		CDHS	80.02.20	4.7000		UG/L
		CDHS	80.03.26	5.6000		UG/L
		CDHS	80.03.28	4.1000		UG/L
		CDHS	80.03.31	3.6000		UG/L
		CDHS	80.04.01	6.5000		UG/L
		CDHS	80.04.02	2.2000		UG/L
		CDHS	80.04.03	3.5000		UG/L
		CDHS	80.04.04	5.0000		UG/L
		CDHS	80.04.28	0.3700		UG/L
		CDHS	80.08.12	4.1000		UG/L
		CDHS	80.08.14	3.3000		UG/L
		CDHS	80.08.29	7.0000		UG/L
		CDHS	80.09.03	6.6000		UG/L
		CDHS	80.10.01	7.8000		UG/L
		CDHS	80.11.05	11.2000		UG/L
		CDHS	80.12.03	9.8000		UG/L
		CDHS	81.01.06	12.0000		UG/L
		CDHS	81.02.03	12.0000		UG/L
		CDHS	81.03.03	7.3000		UG/L
		CDHS	81.03.18	11.0000		UG/L
		CDHS	81.04.06	8.0000		UG/L
		CDHS	81.05.04	8.0000		UG/L
		CDHS	81.06.02	6.4000		UG/L
		CDHS	81.07.07	9.8000		UG/L
		CDHS	81.08.04	7.0000		UG/L
		CDHS	81.09.01	5.6000		UG/L
		CDHS	81.10.06	4.3000		UG/L
		CDHS	81.11.03	8.0000		UG/L
		CDHS	81.12.01	5.1000		UG/L
		CDHS	82.01.05	6.2000		UG/L
		CDHS	82.02.02	5.7000		UG/L
		CDHS	82.03.01	6.0000		UG/L
		CDHS	82.04.06	3.0000		UG/L
		CDHS	82.04.23	6.2000		UG/L
		CDHS	82.05.04	4.2000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900419	TRICHLOROETHYLENE	CDHS	82.06.01	4.5000	UG/L
		CDHS	82.07.05	8.2000	UG/L
		CDHS	82.08.02	10.3000	UG/L
		CDHS	82.08.11	18.0000	UG/L
		CDHS	82.08.19	6.5000	UG/L
		CDHS	82.09.01	5.1000	UG/L
		CDHS	82.10.05	4.6000	UG/L
		CDHS	82.11.01	10.5000	UG/L
		CDHS	82.11.29	5.4000	UG/L
		CDHS	82.12.01	5.4000	UG/L
		CDHS	83.01.04	1.6000	UG/L
		CDHS	83.02.01	2.1000	UG/L
		CDHS	83.03.02	1.6000	UG/L
		CDHS	83.05.04	0.1000	UG/L
		CDHS	83.06.01	0.1000	UG/L
		CDHS	83.07.01	0.1000 L	UG/L
		CDHS	83.08.01	0.2000	UG/L
		CDHS	83.09.01	0.2000	UG/L
		CDHS	83.10.01	0.3000	UG/L
		CDHS	83.11.01	0.2000	UG/L
		CDHS	83.12.01	0.3000	UG/L
		CDHS	84.01.01	0.3000	UG/L
		CDHS	84.02.01	0.1000 L	UG/L
		CDHS	84.03.01	0.5000	UG/L
		CDHS	84.04.01	0.7000	UG/L
		CDHS	84.05.01	1.2000	UG/L
		CDHS	84.06.01	1.7000	UG/L
		CDHS	84.08.01	2.5000	UG/L
		CDHS	84.09.01	1.4000	UG/L
		CDHS	84.10.01	1.0000	UG/L
		CDHS	84.11.01	0.5000	UG/L
		CDHS	84.12.01	0.7000	UG/L
		CDHS	85.01.01	0.4000	UG/L
		CDHS	85.02.01	0.5000	UG/L
		CDHS	85.03.01	0.8000	UG/L
01900420	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.14	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.14	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.14	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.05.04	0.0500 L	UG/L
		CDHS	82.08.11	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.04.06	0.1000	UG/L
		CDHS	81.05.04	0.1000 L	UG/L
		CDHS	81.06.02	0.1000 L	UG/L
		CDHS	81.07.07	0.1000 L	UG/L
		CDHS	81.08.04	0.1000 L	UG/L
		CDHS	81.09.01	0.0100 L	UG/L
		CDHS	81.10.06	0.1000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900420	PERCHLOROETHYLENE	CDHS	81.11.03	0.1000	UG/L
		CDHS	81.11.30	0.1000 L	UG/L
		CDHS	82.01.05	0.1000	UG/L
		CDHS	82.02.01	0.1000 L	UG/L
		CDHS	82.03.01	0.1000	UG/L
		CDHS	82.04.06	0.1000 L	UG/L
		CDHS	82.05.04	0.1000	UG/L
		CDHS	82.06.01	0.1000	UG/L
		CDHS	82.07.06	0.1000 L	UG/L
		CDHS	82.08.03	0.1000 L	UG/L
		CDHS	82.08.11	0.1000 L	UG/L
		CDHS	82.09.01	0.2000	UG/L
		CDHS	82.10.04	0.1000 L	UG/L
		CDHS	82.11.02	0.3000 L	UG/L
		CDHS	82.11.29	0.1000 L	UG/L
		CDHS	82.12.01	0.1000 L	UG/L
		CDHS	83.01.04	0.1000	UG/L
		CDHS	83.02.01	0.1000 L	UG/L
		CDHS	83.02.28	0.1000 L	UG/L
		CDHS	83.04.05	0.1000 L	UG/L
		CDHS	83.05.03	0.1000 L	UG/L
		CDHS	83.06.01	0.1000 L	UG/L
		CDHS	83.07.01	0.1000 L	UG/L
		CDHS	83.08.01	0.1000	UG/L
		CDHS	83.09.01	0.1000 L	UG/L
		CDHS	83.10.01	0.1000	UG/L
		CDHS	83.11.01	0.1000	UG/L
		CDHS	83.12.01	0.1000	UG/L
		CDHS	84.01.01	0.1000	UG/L
		CDHS	84.02.01	0.1000 L	UG/L
		CDHS	84.03.01	0.1000 L	UG/L
		CDHS	84.05.01	0.1000 L	UG/L
		CDHS	84.06.01	0.1000	UG/L
		CDHS	84.08.01	0.1000 L	UG/L
		CDHS	84.09.01	0.1000 L	UG/L
		CDHS	84.10.01	0.1000 L	UG/L
		CDHS	84.11.01	0.1000 L	UG/L
		CDHS	84.12.01	0.1000 L	UG/L
		CDHS	85.01.01	0.1000 L	UG/L
		CDHS	85.02.01	0.1000 L	UG/L
		CDHS	85.03.01	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0500	UG/L
		CDHS	80.08.12	0.0900	UG/L
		CDHS	80.10.01	0.1000 L	UG/L
		CDHS	80.12.03	0.1000 L	UG/L
		CDHS	81.01.06	0.2000	UG/L
		CDHS	81.02.03	0.1000 L	UG/L
		CDHS	81.03.03	0.1000 L	UG/L
		CDHS	81.04.06	0.1000 L	UG/L
		CDHS	81.05.04	0.1000 L	UG/L
		CDHS	81.06.02	0.1000 L	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900419	TRICHLOROETHYLENE	CDHS	82.06.01	4.5000		UG/L
		CDHS	82.07.05	8.2000		UG/L
		CDHS	82.08.02	10.3000		UG/L
		CDHS	82.08.11	18.0000		UG/L
		CDHS	82.08.19	6.5000		UG/L
		CDHS	82.09.01	5.1000		UG/L
		CDHS	82.10.05	4.6000		UG/L
		CDHS	82.11.01	10.5000		UG/L
		CDHS	82.11.29	5.4000		UG/L
		CDHS	82.12.01	5.4000		UG/L
		CDHS	83.01.04	1.6000		UG/L
		CDHS	83.02.01	2.1000		UG/L
		CDHS	83.03.02	1.6000		UG/L
		CDHS	83.05.04	0.1000		UG/L
		CDHS	83.06.01	0.1000		UG/L
		CDHS	83.07.01	0.1000	L	UG/L
		CDHS	83.08.01	0.2000		UG/L
		CDHS	83.09.01	0.2000		UG/L
		CDHS	83.10.01	0.3000		UG/L
		CDHS	83.11.01	0.2000		UG/L
		CDHS	83.12.01	0.3000		UG/L
		CDHS	84.01.01	0.3000		UG/L
		CDHS	84.02.01	0.1000	L	UG/L
		CDHS	84.03.01	0.5000		UG/L
		CDHS	84.04.01	0.7000		UG/L
		CDHS	84.05.01	1.2000		UG/L
		CDHS	84.06.01	1.7000		UG/L
		CDHS	84.08.01	2.5000		UG/L
		CDHS	84.09.01	1.4000		UG/L
		CDHS	84.10.01	1.0000		UG/L
		CDHS	84.11.01	0.5000		UG/L
		CDHS	84.12.01	0.7000		UG/L
		CDHS	85.01.01	0.4000		UG/L
		CDHS	85.02.01	0.5000		UG/L
		CDHS	85.03.01	0.8000		UG/L
01900420	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.14	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.14	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.14	0.0000		
	CARBON TETRACHLORIDE	CDHS	81.05.04	0.0500	L	UG/L
		CDHS	82.08.11	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	81.04.06	0.1000		UG/L
		CDHS	81.05.04	0.1000	L	UG/L
		CDHS	81.06.02	0.1000	L	UG/L
		CDHS	81.07.07	0.1000	L	UG/L
		CDHS	81.08.04	0.1000	L	UG/L
		CDHS	81.09.01	0.0100	L	UG/L
		CDHS	81.10.06	0.1000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900420	PERCHLOROETHYLENE	CDHS	81.11.03	0.1000	UG/L
		CDHS	81.11.30	0.1000 L	UG/L
		CDHS	82.01.05	0.1000	UG/L
		CDHS	82.02.01	0.1000 L	UG/L
		CDHS	82.03.01	0.1000	UG/L
		CDHS	82.04.06	0.1000 L	UG/L
		CDHS	82.05.04	0.1000	UG/L
		CDHS	82.06.01	0.1000	UG/L
		CDHS	82.07.06	0.1000 L	UG/L
		CDHS	82.08.03	0.1000 L	UG/L
		CDHS	82.08.11	0.1000 L	UG/L
		CDHS	82.09.01	0.2000	UG/L
		CDHS	82.10.04	0.1000 L	UG/L
		CDHS	82.11.02	0.3000 L	UG/L
		CDHS	82.11.29	0.1000 L	UG/L
		CDHS	82.12.01	0.1000 L	UG/L
		CDHS	83.01.04	0.1000	UG/L
		CDHS	83.02.01	0.1000 L	UG/L
		CDHS	83.02.28	0.1000 L	UG/L
		CDHS	83.04.05	0.1000 L	UG/L
		CDHS	83.05.03	0.1000 L	UG/L
		CDHS	83.06.01	0.1000 L	UG/L
		CDHS	83.07.01	0.1000 L	UG/L
		CDHS	83.08.01	0.1000	UG/L
		CDHS	83.09.01	0.1000 L	UG/L
		CDHS	83.10.01	0.1000	UG/L
		CDHS	83.11.01	0.1000	UG/L
		CDHS	83.12.01	0.1000	UG/L
		CDHS	84.01.01	0.1000	UG/L
		CDHS	84.02.01	0.1000 L	UG/L
		CDHS	84.03.01	0.1000 L	UG/L
		CDHS	84.05.01	0.1000 L	UG/L
		CDHS	84.06.01	0.1000	UG/L
		CDHS	84.08.01	0.1000 L	UG/L
		CDHS	84.09.01	0.1000 L	UG/L
		CDHS	84.10.01	0.1000 L	UG/L
		CDHS	84.11.01	0.1000 L	UG/L
		CDHS	84.12.01	0.1000 L	UG/L
		CDHS	85.01.01	0.1000 L	UG/L
		CDHS	85.02.01	0.1000 L	UG/L
		CDHS	85.03.01	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0500	UG/L
		CDHS	80.08.12	0.0900	UG/L
		CDHS	80.10.01	0.1000 L	UG/L
		CDHS	80.12.03	0.1000 L	UG/L
		CDHS	81.01.06	0.2000	UG/L
		CDHS	81.02.03	0.1000 L	UG/L
		CDHS	81.03.03	0.1000 L	UG/L
		CDHS	81.04.06	0.1000 L	UG/L
		CDHS	81.05.04	0.1000 L	UG/L
		CDHS	81.06.02	0.1000 L	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900420	TRICHLOROETHYLENE	CDHS	81.07.07	0.1000	L	UG/L
		CDHS	81.08.04	0.1000	L	UG/L
		CDHS	81.09.01	0.0100	L	UG/L
		CDHS	81.10.06	0.1000		UG/L
		CDHS	81.11.03	0.1000	L	UG/L
		CDHS	81.11.30	0.1000	L	UG/L
		CDHS	82.01.05	0.1000	L	UG/L
		CDHS	82.02.01	0.1000	L	UG/L
		CDHS	82.03.01	0.1000		UG/L
		CDHS	82.04.06	0.1000	L	UG/L
		CDHS	82.05.04	0.1000		UG/L
		CDHS	82.06.01	0.1000		UG/L
		CDHS	82.07.06	0.1000	L	UG/L
		CDHS	82.08.03	0.1000	L	UG/L
		CDHS	82.08.11	0.1000	L	UG/L
		CDHS	82.09.01	0.1000		UG/L
		CDHS	82.10.04	0.1000	L	UG/L
		CDHS	82.11.02	0.3000	L	UG/L
		CDHS	82.11.05	0.1000	L	UG/L
		CDHS	82.11.29	0.1000	L	UG/L
		CDHS	82.12.01	0.1000	L	UG/L
		CDHS	83.01.04	0.1000		UG/L
		CDHS	83.02.01	0.1000	L	UG/L
		CDHS	83.02.28	0.1000	L	UG/L
		CDHS	83.04.05	0.1000	L	UG/L
		CDHS	83.05.03	0.1000	L	UG/L
		CDHS	83.06.01	0.1000	L	UG/L
		CDHS	83.07.01	0.1000	L	UG/L
		CDHS	83.08.01	0.1000	L	UG/L
		CDHS	83.09.01	0.1000	L	UG/L
		CDHS	83.10.01	0.1000	L	UG/L
		CDHS	83.11.01	0.1000	L	UG/L
		CDHS	83.12.01	0.1000	L	UG/L
		CDHS	84.01.01	0.1000	L	UG/L
		CDHS	84.02.01	0.1000	L	UG/L
		CDHS	84.03.01	0.1000	L	UG/L
		CDHS	84.05.01	0.1000	L	UG/L
		CDHS	84.06.01	0.1000	L	UG/L
		CDHS	84.08.01	0.1000	L	UG/L
		CDHS	84.09.01	0.1000	L	UG/L
		CDHS	84.10.01	0.1000	L	UG/L
		CDHS	84.11.01	0.1000	L	UG/L
		CDHS	84.12.01	0.1000	L	UG/L
		CDHS	85.01.01	0.1000	L	UG/L
		CDHS	85.02.01	0.1000	L	UG/L
		CDHS	85.03.01	0.1000	L	UG/L
01900453	TRICHLOROETHYLENE	CDHS	80.01.12	2.0000	L	UG/L
01900454	TRICHLOROETHYLENE	CDHS	80.01.12	0.0200		UG/L
01900455	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.10	0.0000		

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900455	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.10	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.10	0.0000	
	TRICHLOROETHYLENE	CDHS	80.01.12	0.3300	UG/L
01900456	PERCHLOROETHYLENE	CDHS	82.08.18	0.2000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	0.3700	UG/L
		CDHS	82.08.18	0.1400	UG/L
01900457	TRICHLOROETHYLENE	CDHS	81.07.10	0.4000	UG/L
01900458	TRICHLOROETHYLENE	CDHS	80.01.12	0.1000	UG/L
		CDHS	81.07.10	0.2000	UG/L
		CDHS	82.08.18	0.7300	UG/L
01900510	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.15	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.15	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.15	0.0000	
	TRICHLOROETHYLENE	CDHS	80.01.14	0.3600	UG/L
01900511	TRICHLOROETHYLENE	CDHS	80.01.14	1.0000	UG/L
01900515	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.15	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.15	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.15	0.0000	
01900725	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.22	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.22	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.22	0.0000	
	PERCHLOROETHYLENE	CDHS	81.07.15	0.1100	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.1200	UG/L
01900791	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.03	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000	
	CARBON TETRACHLORIDE	CDHS	82.08.30	0.1200	UG/L
	PERCHLOROETHYLENE	CDHS	82.08.30	0.1000 L	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01900791	TRICHLOROETHYLENE	CDHS	80.01.12	0.0300	UG/L
		CDHS	82.08.30	0.1000 L	UG/L
01900792	CARBON TETRACHLORIDE	CDHS	81.04.23	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.04.23	0.1100	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0700	UG/L
		CDHS	81.04.23	0.1000 L	UG/L
01900827	CARBON TETRACHLORIDE	CDHS	81.07.15	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.06.20	0.0200	UG/L
		CDHS	80.12.11	0.2200	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.06.20	0.0300	UG/L
		CDHS	80.12.11	0.9200	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
01900828	CARBON TETRACHLORIDE	CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.07	0.2800	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.1000 L	UG/L
01900829	CARBON TETRACHLORIDE	CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.07	0.1000	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
01900831	1,1,1-TRICHLOROETHANE	S3D	85.03.14	170.0000	UG/L
	1,1-DICHLOROETHYLENE	S3D	85.03.14	25.0000	UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.03.14	0.0000 L	
	EPA METHOD 625--NO COMPOUND	ERG	85.03.14	0.0000 L	
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.03.14	0.0000 L	
	CARBON TETRACHLORIDE	CDHS	81.01.13	0.0500 L	UG/L
		CDHS	81.06.14	0.1000 L	UG/L

TDM II
TECHNICAL DATA MANAGEMENT SYSTEM

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900831	CARBON TETRACHLORIDE	CDHS	81.06.16	0.1000	L	UG/L
		CDHS	83.02.22	0.0500	L	UG/L
	FREON-113	S3D	85.03.14	5.0000	L	UG/L
	HYDRAZINE	CAL	85.03.14	1.0000	L	MG/L
	PERCHLOROETHYLENE	CDHS	80.04.03	14.0000		UG/L
		CDHS	81.01.13	25.0000		UG/L
		CDHS	81.06.09	12.0000		UG/L
		CDHS	81.06.14	11.0000		UG/L
		CDHS	81.06.16	11.0000		UG/L
		CDHS	82.08.10	2.0000		UG/L
		CDHS	83.02.22	0.1000	L	UG/L
		CDHS	84.05.08	19.0000		UG/L
		JMM LAB	85.03.14	2.7000		UG/L
	PERCHLORATE	CAL	85.03.14	0.0000	G	MG/L
	SELENIUM	S3D	85.03.14	4.2000	L	UG/L
	TRICHLOROETHYLENE	CDHS	79.12.26	42.0000		UG/L
		CDHS	80.01.07	3.1000		UG/L
		CDHS	80.01.10	1.3000		UG/L
		CDHS	80.01.14	22.0000		UG/L
		CDHS	80.04.03	55.0000		UG/L
		CDHS	81.01.13	302.0000		UG/L
		CDHS	81.06.09	260.0000		UG/L
		CDHS	81.06.14	200.0000		UG/L
		CDHS	81.06.16	220.0000		UG/L
		CDHS	82.08.10	37.0000		UG/L
		CDHS	83.02.22	1.6000		UG/L
		CDHS	84.05.08	164.0000		UG/L
		S3D	85.03.14	8.0000		UG/L
	THIOUREA	PED	85.03.14	50.0000	L	UG/L
	XYLIDINE	ERG	85.03.14	25.0000	L	UG/L
01900881	EPA METHOD 624--NO COMPOUND	S3D	85.04.17	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.17	0.0000	L	
	FREON-113	S3D	85.04.17	1.0000	L	UG/L
	HYDRAZINE	CAL	85.04.17	1.0000	L	MG/L
	PERCHLORATE	CAL	85.04.17	0.0000	G	MG/L
	SELENIUM	CAL	85.04.17	5.0000	L	UG/L
	THIOUREA	PED	85.04.17	10.0000	L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900881	XYLIDINE	S3D	85.04.17	50.0000	L	UG/L
01900882	1,1,1-TRICHLOROETHANE	JMM LAB	85.02.14	1.0000		UG/L
		JMM LAB	85.04.25	5.2000		UG/L
	1,1-DICHLOROETHANE	JMM LAB	85.02.14	2.6000		UG/L
		CDHS	85.03.21	2.0000	L	UG/L
		JMM LAB	85.04.25	4.0000		UG/L
	1,1-DICHLOROETHYLENE	JMM LAB	85.02.14	1.1000		UG/L
		CDHS	85.03.21	1.1000	L	UG/L
		JMM LAB	85.04.25	2.1000		UG/L
	1,2-DICHLOROETHANE	JMM LAB	85.02.14	3.7000		UG/L
		CDHS	85.03.21	1.1000	L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.14	0.0000		
		JMM LAB	85.04.25	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.14	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.14	0.0000		
	CIS-1,2-DICHLOROETHYLENE	CDHS	85.03.21	1.6000	L	UG/L
	CARBON TETRACHLORIDE	JMM LAB	85.02.14	2.9000		UG/L
		CDHS	85.03.21	0.8100		UG/L
		JMM LAB	85.04.25	3.0000		UG/L
	CHLOROFORM	JMM LAB	85.02.14	1.7000		UG/L
		CDHS	85.03.21	0.8600	L	UG/L
		JMM LAB	85.04.25	3.0000		UG/L
	METHYLENE CHLORIDE	JMM LAB	85.04.25	2.0000		UG/L
	PERCHLOROETHYLENE	JMM LAB	85.02.14	10.0000		UG/L
		CDHS	85.03.21	7.5000		UG/L
		JMM LAB	85.04.25	8.9000		UG/L
	TRANS-1,2-DICHLOROETHYLENE	JMM LAB	85.02.14	2.9000		UG/L
		JMM LAB	85.04.25	1.5000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	225.0000		UG/L
		CDHS	80.01.23	230.0000		UG/L
		JMM LAB	85.02.14	108.0000		UG/L
		CDHS	85.03.21	35.0000		UG/L
		JMM LAB	85.04.25	52.0000		UG/L
01900883	PERCHLOROETHYLENE	CDHS	80.06.12	7.9000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	56.0000		UG/L
		CDHS	80.06.12	195.0000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900885	EPA METHOD 624--COMPOUNDS D	S3D	85.04.30	0.0000	L	
	EPA METHOD 625--NO COMPOUND	S3D	85.04.30	0.0000		
	CARBON TETRACHLORIDE	S3D	85.04.30	1.0000		UG/L
	CHLOROFORM	S3D	85.04.30	1.0000	F	UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.04.30	10.0000	F	UG/L
	PERCHLOROETHYLENE	CDHS	80.07.09	7.6000		UG/L
		S3D	85.04.30	1.9000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	108.0000		UG/L
		CDHS	80.07.09	200.0000		UG/L
		S3D	85.04.30	6.0000		UG/L
01900908	TRICHLOROETHYLENE	CDHS	80.01.15	0.0200		UG/L
		CDHS	82.04.16	1.6000		UG/L
01900918	EPA METHOD 624--COMPOUNDS D	S3D	85.05.01	0.0000	L	
	EPA METHOD 625--NO COMPOUND	S3D	85.05.01	0.0000		
	CARBON TETRACHLORIDE	S3D	85.05.01	1.0000		UG/L
	CHLOROFORM	S3D	85.05.01	1.0000	L	UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.05.01	10.0000	F	UG/L
	METHYLENE CHLORIDE	S3D	85.05.01	1.8000	F	UG/L
	PHENOLS	S3D	85.05.01	10.0000	L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0200		UG/L
		CDHS	81.09.10	0.3100		UG/L
01900920	EPA METHOD 624--NO COMPOUND	S3D	85.05.14	0.0000		
	EPA METHOD 625--COMPOUNDS D	S3D	85.05.14	0.0000		
	PHENOLS	S3D	85.05.14	3.0000		UG/L
01900921	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.05	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.05	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.05	0.0000		
01900923	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.08	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.08	0.0000		

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01900923	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.08	0.0000		
01900924	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.08	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.08	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.08	0.0000		
	TRICHLOROETHYLENE	CDHS	80.01.11	2.0000	L	UG/L
01900927	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.08	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.08	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.08	0.0000		
01900934	EPA METHOD 624--NO COMPOUND	S3D	85.05.14	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.05.14	0.0000		
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0300		UG/L
01900935	EPA METHOD 624--NO COMPOUND	S3D	85.05.14	0.0000		
	EPA METHOD 625--COMPOUNDS D	S3D	85.05.14	0.0000		
	PHENOLS	S3D	85.05.14	2.0000		UG/L
01901013	1,1,1-TRICHLOROETHANE	JMM LAB	85.01.24	12.0000		UG/L
		CDHS	85.03.28	13.0000		UG/L
	1,1-DICHLOROETHYLENE	CDHS	84.12.01	6.5000		UG/L
		CDHS	85.01.01	3.6000		UG/L
		JMM LAB	85.01.24	5.3000		UG/L
		CDHS	85.02.01	1.4000	L	UG/L
		CDHS	85.03.01	0.4000	L	UG/L
		CDHS	85.03.28	2.6000	L	UG/L
	1,2-DICHLOROETHANE	CDHS	85.03.28	8.4000		UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.24	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.24	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.24	0.0000		
	CARBON TETRACHLORIDE	CDHS	80.08.29	0.0500	L	UG/L
		CDHS	80.10.24	0.1000	L	UG/L
		CDHS	81.08.27	0.1000		UG/L
		CDHS	81.09.04	0.1000	L	UG/L
		CDHS	81.10.06	0.3000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01901013	CHLOROFORM	CDHS	85.03.28	0.3000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.08.29	0.7500		UG/L
		CDHS	80.10.24	0.5400		UG/L
		CDHS	81.08.27	1.7000		UG/L
		CDHS	81.09.04	1.8000		UG/L
		CDHS	81.10.06	5.1000		UG/L
		CDHS	81.11.17	4.1000		UG/L
		CDHS	81.12.15	6.8000		UG/L
		CDHS	82.01.05	5.9000		UG/L
		CDHS	82.01.19	4.0000		UG/L
		CDHS	82.03.10	5.4000		UG/L
		CDHS	82.03.12	6.5000		UG/L
		CDHS	82.04.20	4.4000		UG/L
		CDHS	82.05.29	4.4000		UG/L
		CDHS	82.08.06	5.8000		UG/L
		CDHS	83.05.06	3.0000		UG/L
		CDHS	84.12.01	2.2000		UG/L
		CDHS	85.01.01	2.4000		UG/L
		JMM LAB	85.01.24	2.0000		UG/L
		CDHS	85.02.01	1.5000		UG/L
		CDHS	85.03.01	1.5000		UG/L
		CDHS	85.03.28	2.8000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	1.5000		UG/L
		CDHS	80.01.23	1.0000		UG/L
		CDHS	80.08.29	0.3900		UG/L
		CDHS	80.10.24	0.3200		UG/L
		CDHS	81.08.27	10.0000		UG/L
		CDHS	81.09.04	13.0000		UG/L
		CDHS	81.10.06	20.0000		UG/L
		CDHS	81.11.17	22.0000		UG/L
		CDHS	81.12.15	48.0000		UG/L
		CDHS	82.01.05	5.3000		UG/L
		CDHS	82.01.19	0.1000	L	UG/L
		CDHS	82.03.10	29.0000		UG/L
		CDHS	82.03.12	36.0000		UG/L
		CDHS	82.04.20	33.0000		UG/L
		CDHS	82.05.29	33.0000		UG/L
		CDHS	82.08.06	47.0000		UG/L
		CDHS	83.05.06	29.0000		UG/L
		CDHS	84.12.01	26.0000		UG/L
		CDHS	85.01.01	47.0000		UG/L
		JMM LAB	85.01.24	42.0000		UG/L
		CDHS	85.02.01	16.0000		UG/L
		CDHS	85.03.01	17.0000		UG/L
		CDHS	85.03.28	35.0000		UG/L
01901014	1,1,1-TRICHLOROETHANE	JMM LAB	85.01.24	12.0000		UG/L
		CDHS	85.03.28	8.1000		UG/L
	1,1-DICHLOROETHYLENE	CDHS	84.12.01	5.2000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01901014	1,1-DICHLOROETHYLENE	CDHS	85.01.01	4.8000		UG/L
		JMM LAB	85.01.24	5.3000		UG/L
		CDHS	85.02.01	2.5000	L	UG/L
		CDHS	85.03.01	1.0000	L	UG/L
		CDHS	85.03.28	1.7000	L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.24	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.24	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.24	0.0000		
	CARBON TETRACHLORIDE	CDHS	81.10.06	0.1000		UG/L
		CDHS	82.04.20	0.0500	L	UG/L
		CDHS	83.05.06	0.0500	L	UG/L
	PERCHLOROETHYLENE	CDHS	81.08.27	0.9600		UG/L
		CDHS	81.09.04	0.9700		UG/L
		CDHS	81.10.06	1.9000		UG/L
		CDHS	81.11.17	2.9000		UG/L
		CDHS	81.12.02	2.2000		UG/L
		CDHS	81.12.15	4.6000		UG/L
		CDHS	82.01.05	7.7000		UG/L
		CDHS	82.01.19	4.8000		UG/L
		CDHS	82.03.10	3.2000		UG/L
		CDHS	82.03.12	2.7000		UG/L
		CDHS	82.04.20	0.6000		UG/L
		CDHS	82.05.29	0.6000		UG/L
		CDHS	82.08.06	2.5000		UG/L
		CDHS	83.05.06	1.0000		UG/L
		CDHS	84.12.01	2.9000		UG/L
		CDHS	85.01.01	3.9000		UG/L
		JMM LAB	85.01.24	3.3000		UG/L
		CDHS	85.02.01	2.7000		UG/L
		CDHS	85.03.01	2.9000		UG/L
		CDHS	85.03.28	3.3000		UG/L
	TRICHLOROETHYLENE	CDHS	81.08.27	4.0000		UG/L
		CDHS	81.09.04	3.9000		UG/L
		CDHS	81.10.06	9.3000		UG/L
		CDHS	81.11.17	2.9000		UG/L
		CDHS	81.12.02	9.7000		UG/L
		CDHS	81.12.15	6.6000		UG/L
		CDHS	82.01.05	0.1000	L	UG/L
		CDHS	82.01.19	1.3000		UG/L
		CDHS	82.03.10	14.3000		UG/L
		CDHS	82.03.12	2.9000		UG/L
		CDHS	82.04.20	1.6000		UG/L
		CDHS	82.05.29	1.6000		UG/L
		CDHS	82.08.06	5.1000		UG/L
		CDHS	83.05.06	7.0000		UG/L
		CDHS	84.12.01	43.0000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901014	TRICHLOROETHYLENE	CDHS	85.01.01	83.0000	UG/L
		JMM LAB	85.01.24	62.0000	UG/L
		CDHS	85.02.01	41.0000	UG/L
		CDHS	85.03.01	33.0000	UG/L
		CDHS	85.03.28	43.0000	UG/L
01901055	PERCHLOROETHYLENE	CDHS	83.11.16	0.3000	UG/L
		CDHS	84.01.25	0.1000 L	UG/L
		CDHS	84.02.21	0.1000 L	UG/L
		CDHS	84.05.03	0.1000 L	UG/L
		CDHS	84.10.31	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	38.0000	UG/L
		CDHS	80.01.15	28.0000	UG/L
		CDHS	80.01.21	34.0000	UG/L
		CDHS	80.08.28	23.0000	UG/L
		CDHS	83.11.16	28.0000	UG/L
		CDHS	84.01.25	62.0000	UG/L
		CDHS	84.02.21	58.0000	UG/L
		CDHS	84.05.03	58.0000	UG/L
		CDHS	84.10.31	121.0000	UG/L
		CDHS	85.04.16	142.0000	UG/L
01901178	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.31	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.31	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.31	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.10.23	0.1000 L	UG/L
		CDHS	82.07.01	0.1000 L	UG/L
		CDHS	82.07.12	0.1000 L	UG/L
		CDHS	83.07.12	0.2000	UG/L
		CDHS	83.10.26	0.1000 L	UG/L
		CDHS	83.12.21	0.5000 L	UG/L
	CHLOROFORM	CDHS	82.07.12	16.0000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.10.23	0.9100	UG/L
		CDHS	81.03.17	3.6000	UG/L
		CDHS	81.05.11	5.1000	UG/L
		CDHS	81.06.01	4.3000	UG/L
		CDHS	82.04.16	49.0000	UG/L
		CDHS	82.04.30	51.7000	UG/L
		CDHS	82.05.07	39.0000	UG/L
		CDHS	82.07.01	46.6000	UG/L
		CDHS	82.07.12	41.7000	UG/L
		CDHS	82.07.22	35.7000	UG/L
		CDHS	82.08.11	37.3000	UG/L
		CDHS	82.09.01	35.7000	UG/L
		CDHS	82.10.22	32.0000	UG/L
		CDHS	82.11.10	49.0000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901178	PERCHLOROETHYLENE	CDHS	82.12.14	35.0000	UG/L
		CDHS	83.02.16	36.0000	UG/L
		CDHS	83.02.22	34.0000	UG/L
		CDHS	83.02.24	33.0000	UG/L
		CDHS	83.02.25	31.0000	UG/L
		CDHS	83.03.03	34.0000	UG/L
		CDHS	83.03.08	28.0000	UG/L
		CDHS	83.03.15	28.0000	UG/L
		CDHS	83.03.23	30.0000	UG/L
		CDHS	83.04.05	36.0000	UG/L
		CDHS	83.04.12	38.0000	UG/L
		CDHS	83.07.12	5.6000	UG/L
		CDHS	83.10.26	2.6000	UG/L
		CDHS	83.11.16	4.3000	UG/L
		CDHS	83.12.21	1.5000	UG/L
		CDHS	84.01.26	0.7000	UG/L
		CDHS	84.03.05	0.6000	UG/L
		CDHS	84.03.07	5.7000	UG/L
		CDHS	84.04.27	0.4000	UG/L
		CDHS	84.10.23	0.5000	UG/L
		CDHS	84.10.31	0.1000 L	UG/L
		CDHS	85.03.22	0.6500	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	1.2000	UG/L
		CDHS	80.01.23	1.4000	UG/L
		CDHS	81.03.17	0.3400	UG/L
		CDHS	81.06.01	0.2500	UG/L
		CDHS	82.05.07	0.4000	UG/L
		CDHS	82.07.01	0.4200	UG/L
		CDHS	82.07.12	0.2000	UG/L
		CDHS	82.09.01	0.5000 L	UG/L
		CDHS	82.12.14	0.3600	UG/L
		CDHS	83.07.12	0.1000 L	UG/L
		CDHS	83.10.26	0.1000 L	UG/L
		CDHS	83.11.16	0.2000	UG/L
		CDHS	83.12.21	0.5000 L	UG/L
		CDHS	84.10.23	0.1000 L	UG/L
		CDHS	84.10.31	0.1000 L	UG/L
01901181	TRICHLOROETHYLENE	CDHS	80.01.11	0.0800	UG/L
01901183	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.07	0.0000	
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.04.25	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.07	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.07	0.0000	
	PERCHLOROETHYLENE	CDHS	81.09.15	0.1900	UG/L
		CDHS	85.04.01	1.2000	UG/L
		JMM LAB	85.04.25	2.0000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01901183	TRICHLOROETHYLENE	CDHS	80.01.11	2.0000	L	UG/L
01901411	EPA METHOD 624--NO COMPOUND	S3D	85.04.30	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.30	0.0000	L	
	CARBON TETRACHLORIDE	S3D	85.04.30	1.0000	L	UG/L
	CHLOROFORM	S3D	85.04.30	1.0000	L	UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.04.30	10.0000	F	UG/L
	METHYLENE CHLORIDE	S3D	85.04.30	1.0000	F	UG/L
	PERCHLOROETHYLENE	S3D	85.04.30	1.0000	L	UG/L
	TRICHLOROETHYLENE	S3D	85.04.30	1.0000	L	UG/L
01901430	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.15	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.15	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.15	0.0000		
	CARBON TETRACHLORIDE	CDHS	81.09.03	0.1000	L	UG/L
		CDHS	82.07.21	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	81.09.03	0.1000	L	UG/L
		CDHS	82.07.21	0.1000	L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.1300		UG/L
		CDHS	81.09.03	0.1000	L	UG/L
		CDHS	82.07.21	0.1300		UG/L
01901432	1,1,1-TRICHLOROETHANE	CDHS	85.08.27	0.5300	L	UG/L
	1,1-DICHLOROETHYLENE	CDHS	85.08.27	0.4500	L	UG/L
	CIS-1,2-DICHLOROETHYLENE	CDHS	85.04.25	0.9200	L	UG/L
		CDHS	85.08.27	1.6000	L	UG/L
	PERCHLOROETHYLENE	CDHS	85.04.25	0.8600		UG/L
		CDHS	85.08.27	1.2000		UG/L
	TRICHLOROETHYLENE	CDHS	85.04.25	1.9000		UG/L
		CDHS	85.08.27	2.4000		UG/L
01901433	CARBON TETRACHLORIDE	CDHS	81.09.03	0.1300		UG/L
		CDHS	82.07.21	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	81.09.03	0.1100		UG/L
		CDHS	82.07.21	0.1000	L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901433	TRICHLOROETHYLENE	CDHS	80.01.11	0.4500	UG/L
		CDHS	81.09.03	0.7400	UG/L
		CDHS	82.07.21	0.3400	UG/L
01901434	1,1,1-TRICHLOROETHANE	CDHS	85.08.27	0.8300 L	UG/L
	1,1-DICHLOROETHYLENE	CDHS	85.08.27	0.5500 L	UG/L
	CIS-1,2-DICHLOROETHYLENE	CDHS	85.08.27	2.8000	UG/L
	CARBON TETRACHLORIDE	CDHS	81.09.03	0.1300	UG/L
		CDHS	82.07.21	0.5000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.09.10	1.9000	UG/L
		CDHS	81.09.03	0.9700	UG/L
		CDHS	82.07.21	1.1000	UG/L
		CDHS	85.08.27	2.7000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	2.2000	UG/L
		CDHS	80.01.22	2.4000	UG/L
		CDHS	80.09.10	2.9000	UG/L
		CDHS	81.09.03	2.1000	UG/L
		CDHS	82.07.21	2.0000	UG/L
		CDHS	85.08.27	3.4000	UG/L
01901441	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.08	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.08	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.08	0.0000	
	PERCHLOROETHYLENE	JMM LAB	85.01.08	0.5000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.1700	UG/L
		CDHS	81.07.21	0.4900	UG/L
		CDHS	85.01.08	6.8000	UG/L
01901460	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.14	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.14	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.14	0.0000	
01901492	EPA METHOD 624--COMPOUNDS D	S3D	85.04.24	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.04.24	0.0000	
	PERCHLOROETHYLENE	S3D	85.04.24	1.0000 L	UG/L
	PHENOLS	S3D	85.04.24	10.0000 L	UG/L
	TRICHLOROETHYLENE	S3D	85.04.24	1.0000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901521	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.05	0.0000	
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.04.25	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.05	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.05	0.0000	
	PERCHLOROETHYLENE	CDHS	80.10.31	2.8000	UG/L
		CDHS	81.01.07	8.7000	UG/L
		CDHS	81.01.12	6.3000	UG/L
		CDHS	81.02.12	5.5000	UG/L
		CDHS	81.03.10	7.0000	UG/L
		CDHS	81.03.18	6.9000	UG/L
		CDHS	81.07.13	12.5000	UG/L
		CDHS	81.07.15	11.0000	UG/L
		CDHS	81.07.23	12.0000	UG/L
		CDHS	81.09.23	13.0000	UG/L
		CDHS	82.02.18	27.0000	UG/L
		CDHS	82.03.05	23.4000	UG/L
		CDHS	82.04.14	23.0000	UG/L
		CDHS	82.06.08	38.0000	UG/L
		CDHS	82.06.18	39.0000	UG/L
		CDHS	82.06.23	29.0000	UG/L
		CDHS	82.06.30	30.0000	UG/L
		CDHS	82.07.23	26.1100	UG/L
		CDHS	82.08.05	38.0000	UG/L
		CDHS	82.08.18	39.0000	UG/L
		CDHS	82.09.30	39.0000	UG/L
		CDHS	82.10.27	50.0000	UG/L
		CDHS	82.12.22	38.0000	UG/L
		CDHS	82.12.29	46.0000	UG/L
		CDHS	83.01.19	27.0000	UG/L
		CDHS	83.02.16	45.0000	UG/L
		CDHS	83.04.03	74.0000	UG/L
		CDHS	83.04.07	86.0000	UG/L
		CDHS	83.04.11	54.0000	UG/L
		CDHS	83.04.13	88.0000	UG/L
		CDHS	83.04.14	88.0000	UG/L
		CDHS	83.04.28	72.0000	UG/L
		CDHS	83.05.02	75.0000	UG/L
		CDHS	83.05.03	96.0000	UG/L
		CDHS	83.05.17	78.0000	UG/L
		CDHS	83.06.01	62.0000	UG/L
		CDHS	83.09.28	21.0000	UG/L
		CDHS	84.01.12	37.0000	UG/L
		CDHS	84.01.19	27.0000	UG/L
		CDHS	84.02.14	11.0000	UG/L
		CDHS	84.03.13	11.0000	UG/L
		CDHS	84.04.10	13.0000	UG/L
		CDHS	84.04.11	54.0000	UG/L
		CDHS	84.04.24	13.0000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01901521	PERCHLOROETHYLENE	CDHS	84.05.08	13.0000		UG/L
		CDHS	84.05.22	18.0000		UG/L
		CDHS	84.06.05	50.0000		UG/L
		CDHS	84.06.19	1.0000	L	UG/L
		CDHS	84.07.03	12.0000	L	UG/L
		CDHS	84.07.17	1.0000	L	UG/L
		CDHS	84.09.25	1.0000	L	UG/L
		CDHS	84.10.02	1.0000	L	UG/L
		CDHS	85.03.22	24.0000		UG/L
		JMM LAB	85.04.25	17.0000		UG/L
		CDHS	85.06.28	14.0000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	0.1800		UG/L
		CDHS	80.01.23	0.1600		UG/L
		CDHS	81.03.10	0.1000	L	UG/L
		CDHS	82.10.27	0.6800		UG/L
		CDHS	82.12.22	1.2000		UG/L
		CDHS	82.12.29	1.7000		UG/L
01901522	CARBON TETRACHLORIDE	CDHS	80.10.09	0.1500		UG/L
		CDHS	80.11.14	0.1000	L	UG/L
		CDHS	81.03.26	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.10.09	21.0000		UG/L
		CDHS	80.11.14	25.0000		UG/L
		CDHS	81.01.07	33.0000		UG/L
		CDHS	81.02.12	7.8000		UG/L
		CDHS	81.03.10	18.0000		UG/L
		CDHS	81.03.18	10.0000		UG/L
		CDHS	81.03.26	34.0000		UG/L
		CDHS	81.07.21	31.0000		UG/L
		CDHS	81.07.23	28.0000		UG/L
		CDHS	81.09.28	24.0000		UG/L
		CDHS	82.02.01	36.0000		UG/L
		CDHS	82.02.18	32.4000		UG/L
		CDHS	82.03.04	24.0000		UG/L
		CDHS	82.03.05	29.9000		UG/L
		CDHS	82.04.14	20.0000		UG/L
		CDHS	82.05.01	30.0000		UG/L
		CDHS	82.06.08	50.0000		UG/L
		CDHS	82.06.18	42.0000		UG/L
		CDHS	82.06.23	30.0000		UG/L
		CDHS	82.06.30	35.0000		UG/L
		CDHS	82.07.01	45.0000		UG/L
		CDHS	82.07.07	39.0000		UG/L
		CDHS	82.07.23	31.2700		UG/L
		CDHS	82.08.01	47.0000		UG/L
		CDHS	82.08.05	45.0000		UG/L
		CDHS	82.08.18	45.0000		UG/L
		CDHS	82.09.01	19.0000		UG/L
		CDHS	82.09.30	45.0000		UG/L
		CDHS	82.10.01	27.0000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901522	PERCHLOROETHYLENE	CDHS	82.10.27	44.0000	UG/L
		CDHS	82.11.01	44.0000	UG/L
		CDHS	82.11.22	43.0000	UG/L
		CDHS	83.01.01	27.0000	UG/L
		CDHS	83.02.16	50.0000	UG/L
		CDHS	83.04.01	71.0000	UG/L
		CDHS	83.04.07	86.0000	UG/L
		CDHS	83.04.08	81.0000	UG/L
		CDHS	83.04.11	53.0000	UG/L
		CDHS	83.05.02	74.0000	UG/L
		CDHS	83.05.17	92.0000	UG/L
		CDHS	84.01.12	40.0000	UG/L
		CDHS	84.01.19	27.0000	UG/L
		CDHS	84.02.14	28.0000	UG/L
		CDHS	84.03.13	35.0000	UG/L
		CDHS	84.04.10	36.0000	UG/L
		CDHS	84.04.11	53.0000	UG/L
		CDHS	84.04.24	40.0000	UG/L
		CDHS	84.05.08	12.0000	UG/L
		CDHS	84.05.22	1.0000 L	UG/L
		CDHS	84.06.05	54.0000	UG/L
		CDHS	84.06.19	1.0000 L	UG/L
		CDHS	84.07.03	46.0000	UG/L
		CDHS	84.07.17	1.0000 L	UG/L
		CDHS	84.09.25	1.0000 L	UG/L
		CDHS	84.10.02	1.0000 L	UG/L
		CDHS	85.03.22	75.0000	UG/L
		CDHS	85.06.28	87.0000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	1.6000	UG/L
		CDHS	80.01.23	1.7000	UG/L
		CDHS	80.10.09	0.9800	UG/L
		CDHS	80.11.14	2.2000	UG/L
		CDHS	81.03.18	1.5000	UG/L
		CDHS	81.03.26	3.0000	UG/L
		CDHS	82.09.30	0.9500	UG/L
		CDHS	82.10.27	1.2000	UG/L
		CDHS	82.11.22	1.6000	UG/L
01901523	CARBON TETRACHLORIDE	CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.06.20	0.0200	UG/L
		CDHS	80.12.11	0.1500	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.12.11	0.7700	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
01901524	CARBON TETRACHLORIDE	CDHS	81.07.15	0.1200	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901524	CARBON TETRACHLORIDE	CDHS	82.08.10	0.2700 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.03.04	0.0600	UG/L
		CDHS	80.03.12	0.0400	UG/L
		CDHS	80.08.04	0.0800	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.07	0.4800	UG/L
		CDHS	80.03.04	0.2600	UG/L
		CDHS	80.03.12	0.6100	UG/L
		CDHS	80.08.04	0.6500	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
01901525	EPA METHOD 624--NO COMPOUND	S3D	85.03.14	0.0000 L	
	EPA METHOD 625--NO COMPOUND	ERG	85.03.14	0.0000 L	
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.03.14	0.0000 L	
	CARBON TETRACHLORIDE	CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
	FREON-113	S3D	85.03.14	5.0000 L	UG/L
	HYDRAZINE	CAL	85.03.14	1.0000 L	MG/L
	PERCHLOROETHYLENE	CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
	PERCHLORATE	CAL	85.03.14	0.0000 G	MG/L
	SELENIUM	S3D	85.03.14	4.2000 L	UG/L
	TRICHLOROETHYLENE	CDHS	79.12.27	0.4800	UG/L
		CDHS	80.01.07	0.4400	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.08.10	0.2000 L	UG/L
	THIOUREA	PED	85.03.14	50.0000 L	UG/L
	XYLIDINE	ERG	85.03.14	25.0000 L	UG/L
01901526	EPA METHOD 624--NO COMPOUND	S3D	85.03.14	0.0000 L	
	EPA METHOD 625--NO COMPOUND	ERG	85.03.14	0.0000 L	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.14	0.0000	
	FREON-113	S3D	85.03.14	5.0000 L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901526	XYLIDINE	ERG	85.03.14	25.0000 L	UG/L
01901596	1,1-DICHLOROETHYLENE	JMM LAB	85.03.19	0.2000	UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.03.19	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.19	0.0000	
	EPA METHOD 625--COMPOUNDS D	ERG	85.03.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.19	0.0000	
	BIS(2-ETHYLHEXYL)PHTHALATE	ERG	85.03.19	17.0000	UG/L
	CARBON TETRACHLORIDE	CDHS	80.09.10	0.0500 L	UG/L
		CDHS	81.03.27	0.1000 L	UG/L
		CDHS	82.07.21	0.5000 L	UG/L
	FREON-113	S3D	85.03.19	5.0000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.09.10	0.1100	UG/L
		CDHS	81.03.27	0.1500	UG/L
		CDHS	82.07.21	0.5000	UG/L
		JMM LAB	85.03.19	1.2000	UG/L
	TRANS-1,2-DICHLOROETHYLENE	JMM LAB	85.03.19	1.0000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	4.0000	UG/L
		CDHS	80.01.23	0.5200	UG/L
		CDHS	80.09.10	6.8000	UG/L
		CDHS	81.03.27	8.4000	UG/L
		CDHS	81.06.25	8.2000	UG/L
		CDHS	81.12.14	8.1000	UG/L
		CDHS	82.07.16	9.6000	UG/L
		CDHS	82.07.21	10.7000	UG/L
		S3D	85.03.19	23.0000	UG/L
	XYLIDINE	ERG	85.03.19	25.0000 L	UG/L
01901597	CARBON TETRACHLORIDE	CDHS	81.09.03	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.07.08	0.1000	UG/L
		CDHS	81.09.03	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.02.06	0.0200	UG/L
		CDHS	81.07.08	0.1000 L	UG/L
		CDHS	81.09.03	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
01901598	CARBON TETRACHLORIDE	CDHS	80.09.10	0.7500	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901598	CARBON TETRACHLORIDE	CDHS	81.09.02	0.7000	UG/L
		CDHS	82.07.21	0.2500	UG/L
	PERCHLOROETHYLENE	CDHS	80.03.12	1.3000	UG/L
		CDHS	80.08.06	0.7000	UG/L
		CDHS	80.09.10	0.9500	UG/L
		CDHS	81.09.02	2.1000	UG/L
		CDHS	82.02.02	1.7000	UG/L
		CDHS	82.04.02	1.2000	UG/L
		CDHS	82.07.16	1.4000	UG/L
		CDHS	82.07.21	1.1000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	27.0000	UG/L
		CDHS	80.01.11	28.0000	UG/L
		CDHS	80.01.15	4.4000	UG/L
		CDHS	80.02.29	3.4000	UG/L
		CDHS	80.03.12	22.0000	UG/L
		CDHS	80.06.11	11.4000	UG/L
		CDHS	80.08.05	19.0000	UG/L
		CDHS	80.08.06	19.0000	UG/L
		CDHS	80.09.10	17.7000	UG/L
		CDHS	81.06.23	20.0000	UG/L
		CDHS	81.09.02	12.5000	UG/L
		CDHS	82.02.02	9.5000	UG/L
		CDHS	82.04.02	10.9000	UG/L
		CDHS	82.07.16	6.1000	UG/L
		CDHS	82.07.21	5.2100	UG/L
		CDHS	82.07.30	6.7000	UG/L
		CDHS	83.03.09	2.3000	UG/L
		CDHS	83.06.22	3.7000	UG/L
01901599	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.03.12	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.12	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.12	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.09.10	0.8000	UG/L
		CDHS	81.01.15	0.5600	UG/L
		CDHS	81.09.02	0.3800	UG/L
		CDHS	82.07.21	0.3500	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.29	0.6000	UG/L
		CDHS	80.03.12	0.6600	UG/L
		CDHS	80.03.24	12.1000	UG/L
		CDHS	80.04.17	0.5600	UG/L
		CDHS	80.04.22	0.7800	UG/L
		CDHS	80.09.10	1.1000	UG/L
		CDHS	81.01.15	1.5000	UG/L
		CDHS	81.06.23	1.5000	UG/L
		CDHS	81.09.02	1.2000	UG/L
		CDHS	82.04.02	0.3000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901599	PERCHLOROETHYLENE	CDHS	82.07.16	0.6000	UG/L
		CDHS	82.07.21	0.5100	UG/L
		JMM LAB	85.03.12	0.6000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	12.0000	UG/L
		CDHS	80.01.10	5.6000	UG/L
		CDHS	80.01.11	4.0000	UG/L
		CDHS	80.01.18	1.0000	UG/L
		CDHS	80.01.22	3.8000	UG/L
		CDHS	80.02.06	4.0000	UG/L
		CDHS	80.02.29	7.5000	UG/L
		CDHS	80.03.04	4.7000	UG/L
		CDHS	80.03.12	9.2000	UG/L
		CDHS	80.03.24	10.5000	UG/L
		CDHS	80.04.10	13.2000	UG/L
		CDHS	80.04.15	10.6000	UG/L
		CDHS	80.04.17	11.0000	UG/L
		CDHS	80.04.22	11.0000	UG/L
		CDHS	80.04.28	9.8000	UG/L
		CDHS	80.08.05	18.0000	UG/L
		CDHS	80.08.06	18.0000	UG/L
		CDHS	80.09.10	14.6000	UG/L
		CDHS	81.01.15	16.0000	UG/L
		CDHS	81.06.23	12.7000	UG/L
		CDHS	81.09.02	8.3000	UG/L
		CDHS	81.12.14	6.5000	UG/L
		CDHS	82.03.30	1.5000	UG/L
		CDHS	82.04.02	3.2000	UG/L
		CDHS	82.07.16	5.2000	UG/L
		CDHS	82.07.21	5.1000	UG/L
		CDHS	82.12.02	1.7000	UG/L
		CDHS	83.03.30	2.6000	UG/L
		CDHS	83.06.15	4.3000	UG/L
		JMM LAB	85.03.12	5.1000	UG/L
01901602	TRICHLOROETHYLENE	CDHS	80.01.10	1.0000	UG/L
01901604	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.12	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.12	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.12	0.0000	
	TRICHLOROETHYLENE	CDHS	80.06.06	0.8000	UG/L
		CDHS	83.06.15	0.5000 L	UG/L
01901606	EPA METHOD 624--NO COMPOUND	S3D	85.05.07	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.05.07	0.0000	
	CARBON TETRACHLORIDE	CDHS	82.07.20	0.5000 L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901606	PERCHLOROETHYLENE	CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.5000 L	UG/L
	TRICHLOROETHYLENE	CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.5000 L	UG/L
01901608	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.19	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.19	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
		CDHS	84.11.05	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0100 L	UG/L
		CDHS	81.09.02	0.2700	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
		CDHS	83.06.15	0.5000 L	UG/L
		CDHS	84.11.05	0.1000 L	UG/L
01901612	1,1,1-TRICHLOROETHANE	JMM LAB	85.03.19	0.1000 L	UG/L
	1,1-DICHLOROETHYLENE	JMM LAB	85.03.19	0.1000 L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.03.19	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.19	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.09.10	0.1000	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.21	0.5000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.08.06	0.0200	UG/L
		CDHS	80.09.10	0.1000	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.21	0.1000 L	UG/L
		JMM LAB	85.03.19	0.8000	UG/L
	TRANS-1,2-DICHLOROETHYLENE	JMM LAB	85.03.19	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	0.3400	UG/L
		CDHS	80.01.11	2.0000 L	UG/L
		CDHS	80.02.29	0.7000	UG/L
		CDHS	80.03.04	0.5000 L	UG/L
		CDHS	80.03.29	0.6500	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901612	TRICHLOROETHYLENE	CDHS	80.08.05	0.1700	UG/L
		CDHS	80.08.06	0.1700	UG/L
		CDHS	80.09.10	0.1000	UG/L
		CDHS	81.09.02	0.2500	UG/L
		CDHS	82.07.21	0.1000 L	UG/L
		CDHS	83.06.21	0.5000 L	UG/L
		JMM LAB	85.03.19	0.5000 L	UG/L
01901613	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.12	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.12	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.12	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.09.10	0.1000 L	UG/L
		CDHS	81.01.15	0.1000 L	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
		CDHS	82.07.21	0.5000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.08.06	0.0400	UG/L
		CDHS	80.09.10	0.1000 L	UG/L
		CDHS	81.01.15	0.1000 L	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
		CDHS	82.07.21	0.5000 L	UG/L
		CDHS	84.11.08	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	2.9000	UG/L
		CDHS	80.01.16	0.0100 L	UG/L
		CDHS	80.01.22	0.0300	UG/L
		CDHS	80.02.29	0.8000	UG/L
		CDHS	80.03.04	0.5000 L	UG/L
		CDHS	80.03.29	0.4800	UG/L
		CDHS	80.08.05	0.0700	UG/L
		CDHS	80.08.06	0.0100	UG/L
		CDHS	80.09.10	0.1000 L	UG/L
		CDHS	81.01.15	0.1000 L	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
		CDHS	82.07.21	0.5000 L	UG/L
		CDHS	83.06.15	0.5000 L	UG/L
		CDHS	84.11.08	0.1000 L	UG/L
01901615	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.19	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.19	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.03.27	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901615	PERCHLOROETHYLENE	CDHS	81.03.27	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0300	UG/L
		CDHS	80.12.17	0.1800	UG/L
		CDHS	81.03.27	0.1000	UG/L
		CDHS	82.07.20	0.2600	UG/L
		CDHS	83.06.15	0.5000 L	UG/L
01901616	EPA METHOD 624--NO COMPOUND	S3D	85.05.07	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.05.07	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.09.03	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.12.17	0.1400	UG/L
		CDHS	81.09.03	0.1300	UG/L
		CDHS	82.07.20	0.1900	UG/L
	TRICHLOROETHYLENE	CDHS	80.12.17	0.1000	UG/L
		CDHS	81.01.16	0.0100 L	UG/L
		CDHS	81.09.03	0.1000 L	UG/L
		CDHS	82.07.20	0.2500	UG/L
		CDHS	83.06.21	0.5000 L	UG/L
01901617	PERCHLOROETHYLENE	CDHS	81.04.23	33.0000	UG/L
		CDHS	81.04.29	27.3000	UG/L
	TRICHLOROETHYLENE	CDHS	81.04.03	26.8000	UG/L
		CDHS	81.04.29	22.5000	UG/L
01901618	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.19	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.19	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.1000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0200	UG/L
		CDHS	80.12.17	0.2600	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.2500	UG/L
		CDHS	83.06.15	0.5000	UG/L
01901619	CARBON TETRACHLORIDE	CDHS	81.09.02	0.1000 L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901619	PERCHLOROETHYLENE	CDHS	81.09.02	0.1000 L	UG/L
		CDHS	84.11.05	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	2.0000 L	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	81.12.14	0.1000 L	UG/L
		CDHS	83.06.15	0.5000 L	UG/L
		CDHS	84.11.05	0.1000 L	UG/L
01901621	CARBON TETRACHLORIDE	CDHS	81.09.03	0.1900	UG/L
	PERCHLOROETHYLENE	CDHS	80.04.11	227.0000	UG/L
		CDHS	81.09.03	41.0000	UG/L
	TRICHLOROETHYLENE	CDHS	80.02.06	28.0000	UG/L
		CDHS	80.04.11	47.0000	UG/L
		CDHS	81.09.03	19.0000	UG/L
01901623	CARBON TETRACHLORIDE	CDHS	81.09.02	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.12.17	0.1200	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	84.11.08	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.16	0.0200 L	UG/L
		CDHS	80.12.17	0.3900	UG/L
		CDHS	81.09.02	0.2500	UG/L
		CDHS	83.06.15	0.5000	UG/L
		CDHS	84.11.08	0.1000 L	UG/L
01901624	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.03.12	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.12	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.12	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.07.08	0.1000 L	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.02.06	0.0200	UG/L
		CDHS	81.07.08	0.1000 L	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	82.07.20	0.3400	UG/L
		JMM LAB	85.03.12	0.8000	UG/L
01901625	PERCHLOROETHYLENE	CDHS	80.03.21	335.0000	UG/L
		CDHS	80.04.11	148.0000	UG/L
		CDHS	80.06.06	131.0000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01901625	PERCHLOROETHYLENE	CDHS	81.09.03	80.0000		UG/L
		CDHS	81.09.25	81.0000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	18.8000		UG/L
		CDHS	80.01.14	18.0000		UG/L
		CDHS	80.01.15	20.4000		UG/L
		CDHS	80.02.20	14.2000		UG/L
		CDHS	80.02.22	14.2000		UG/L
		CDHS	80.03.12	42.0000		UG/L
		CDHS	80.03.20	34.5000		UG/L
		CDHS	80.03.21	46.0000		UG/L
		CDHS	80.04.11	38.0000		UG/L
		CDHS	80.06.06	28.2000		UG/L
		CDHS	81.09.03	26.0000		UG/L
		CDHS	81.09.25	28.0000		UG/L
01901627	CARBON TETRACHLORIDE	CDHS	81.09.03	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	81.09.03	4.8000		UG/L
		CDHS	81.09.25	5.0000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.4900		UG/L
		CDHS	80.10.02	0.4600		UG/L
		CDHS	81.09.03	3.2000		UG/L
		CDHS	81.09.25	4.3000		UG/L
01901669	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.10	0.0000		
		JMM LAB	85.04.25	0.0000		
		JMM LAB	85.10.01	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.10	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.10	0.0000		
	CHLOROFORM	JMM LAB	85.01.10	0.2000		UG/L
		JMM LAB	85.10.01	0.2000		UG/L
	PERCHLOROETHYLENE	JMM LAB	85.01.10	0.1000		UG/L
		JMM LAB	85.04.25	0.3000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	0.0700		UG/L
		JMM LAB	85.04.25	0.3000		UG/L
01901672	TRICHLOROETHYLENE	CDHS	80.01.12	0.1800		UG/L
01901681	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.03	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000		
	PERCHLOROETHYLENE	JMM LAB	85.01.03	13.0000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01901686	EPA METHOD 624--NO COMPOUND	S3D	85.03.14	0.0000		
	EPA METHOD 625--NO COMPOUND	ERG	85.03.14	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.14	0.0000		
	FREON-113	S3D	85.03.14	5.0000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.06.12	7.9000		UG/L
		CDHS	80.12.16	0.1200		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	56.0000		UG/L
		CDHS	80.06.12	195.0000		UG/L
	XYLIDINE	ERG	85.03.14	25.0000	L	UG/L
01901692	CARBON TETRACHLORIDE	CDHS	80.09.05	0.1600		UG/L
		CDHS	82.08.25	0.1400		UG/L
		CDHS	82.09.15	0.4400		UG/L
	PERCHLOROETHYLENE	CDHS	80.09.05	0.1000		UG/L
		CDHS	82.08.25	0.3400		UG/L
		CDHS	82.09.15	0.9300		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	2.8000		UG/L
		CDHS	80.01.14	1.8000		UG/L
		CDHS	80.09.05	1.1000		UG/L
		CDHS	82.08.25	1.6000		UG/L
		CDHS	82.09.15	3.7000		UG/L
		CDHS	82.09.25	3.1000		UG/L
01901693	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.17	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.17	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.17	0.0000		
	CARBON TETRACHLORIDE	CDHS	82.08.25	0.1300		UG/L
	PERCHLOROETHYLENE	CDHS	82.01.05	1.0000		UG/L
		CDHS	82.08.25	0.3400		UG/L
	TRICHLOROETHYLENE	CDHS	82.01.05	0.1000		UG/L
		CDHS	82.08.25	0.2800		UG/L
01901694	1,1-DICHLOROETHYLENE	CDHS	85.02.21	0.1000	L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.17	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.17	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.17	0.0000		
	CARBON TETRACHLORIDE	CDHS	80.09.05	0.0500	L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901694	CARBON TETRACHLORIDE	CDHS	81.03.26	0.1000 L	UG/L
		CDHS	81.09.05	0.1000 L	UG/L
		CDHS	82.08.25	0.1300	UG/L
	METHYLENE CHLORIDE	JMM LAB	85.01.17	4.7000	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.14	6.4000	UG/L
		CDHS	80.02.20	5.5000	UG/L
		CDHS	80.03.26	7.5000	UG/L
		CDHS	80.04.08	15.0000	UG/L
		CDHS	80.04.10	8.6000	UG/L
		CDHS	80.04.16	7.0000	UG/L
		CDHS	80.04.23	4.9000	UG/L
		CDHS	80.07.01	10.6000	UG/L
		CDHS	80.08.07	3.2000	UG/L
		CDHS	80.09.02	6.4000	UG/L
		CDHS	80.09.05	6.8000	UG/L
		CDHS	80.10.03	6.0000	UG/L
		CDHS	80.11.03	6.5000	UG/L
		CDHS	80.12.02	6.5000	UG/L
		CDHS	81.01.06	8.2000	UG/L
		CDHS	81.03.26	7.0000	UG/L
		CDHS	81.06.23	11.2000	UG/L
		CDHS	81.08.04	8.3000	UG/L
		CDHS	81.09.01	6.6000	UG/L
		CDHS	81.09.05	7.2000	UG/L
		CDHS	81.09.15	5.0000	UG/L
		CDHS	81.09.25	6.2000	UG/L
		CDHS	81.11.10	5.2000	UG/L
		CDHS	81.12.01	6.7000	UG/L
		CDHS	82.02.01	7.5000	UG/L
		CDHS	82.03.02	7.2000	UG/L
		CDHS	82.05.04	9.0000	UG/L
		CDHS	82.06.15	7.5000	UG/L
		CDHS	82.06.29	7.3000	UG/L
		CDHS	82.07.13	6.1000	UG/L
		CDHS	82.07.20	7.7000	UG/L
		CDHS	82.08.03	7.6000	UG/L
		CDHS	82.08.25	0.3400	UG/L
		CDHS	82.09.07	6.0000	UG/L
		CDHS	82.10.05	5.3000	UG/L
		CDHS	83.07.01	6.1000	UG/L
		CDHS	83.08.01	7.5000	UG/L
		CDHS	83.09.01	11.4000	UG/L
		CDHS	83.10.01	7.2000	UG/L
		CDHS	83.11.01	8.3000	UG/L
		CDHS	84.03.06	16.2000	UG/L
		CDHS	84.03.09	13.0000	UG/L
		CDHS	84.04.01	17.2000	UG/L
		CDHS	84.05.01	22.1000	UG/L
		CDHS	84.06.01	18.9000	UG/L
		CDHS	84.07.01	18.6000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901694	PERCHLOROETHYLENE	CDHS	84.08.01	18.7000	UG/L
		CDHS	84.09.04	18.5000	UG/L
		CDHS	84.10.01	19.1000	UG/L
		CDHS	84.11.28	19.0000	UG/L
		JMM LAB	85.01.17	16.0000	UG/L
		CDHS	85.02.21	10.0000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	5.6000	UG/L
		CDHS	80.01.14	5.2000	UG/L
		CDHS	80.01.23	4.0000	UG/L
		CDHS	80.02.14	4.4000	UG/L
		CDHS	80.02.20	7.8000	UG/L
		CDHS	80.03.26	4.3000	UG/L
		CDHS	80.04.08	4.6000	UG/L
		CDHS	80.04.10	5.7000	UG/L
		CDHS	80.04.16	4.6000	UG/L
		CDHS	80.04.23	3.9000	UG/L
		CDHS	80.07.01	5.8000	UG/L
		CDHS	80.08.07	1.9500	UG/L
		CDHS	80.09.02	4.2000	UG/L
		CDHS	80.09.05	4.5000	UG/L
		CDHS	80.10.03	3.9000	UG/L
		CDHS	80.11.03	3.1000	UG/L
		CDHS	80.12.02	3.9000	UG/L
		CDHS	81.01.06	3.7000	UG/L
		CDHS	81.03.26	5.2000	UG/L
		CDHS	81.06.23	3.1000	UG/L
		CDHS	81.07.01	3.1000	UG/L
		CDHS	81.08.04	2.9000	UG/L
		CDHS	81.09.01	2.7000	UG/L
		CDHS	81.09.05	1.7000	UG/L
		CDHS	81.09.15	7.2000	UG/L
		CDHS	81.09.25	2.1000	UG/L
		CDHS	81.11.10	1.7000	UG/L
		CDHS	81.12.01	1.6000	UG/L
		CDHS	82.03.02	1.6000	UG/L
		CDHS	82.05.04	2.2000	UG/L
		CDHS	82.06.15	1.7000	UG/L
		CDHS	82.06.29	1.5000	UG/L
		CDHS	82.07.13	0.9300	UG/L
		CDHS	82.07.20	1.8000	UG/L
		CDHS	82.08.03	1.6000	UG/L
		CDHS	82.08.25	0.2800	UG/L
		CDHS	82.09.07	0.7000	UG/L
		CDHS	82.10.05	0.5200	UG/L
		CDHS	83.07.01	1.6000	UG/L
		CDHS	83.08.01	1.4000	UG/L
		CDHS	83.09.01	0.5000	UG/L
		CDHS	83.10.01	1.3000	UG/L
		CDHS	83.11.01	1.2000	UG/L
		CDHS	84.03.06	0.9000	UG/L
		CDHS	84.03.09	0.7300	UG/L
		CDHS	84.04.01	0.7000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901694	TRICHLOROETHYLENE	CDHS	84.05.01	1.0000	UG/L
		CDHS	84.06.01	0.6000	UG/L
		CDHS	84.07.01	0.7000	UG/L
		CDHS	84.08.01	0.5000	UG/L
		CDHS	84.09.04	0.5000	UG/L
		CDHS	84.10.01	0.2000	UG/L
		CDHS	84.11.28	0.1000 L	UG/L
		CDHS	85.02.21	1.0000 L	UG/L
01901695	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.17	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.17	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.17	0.0000	
	PERCHLOROETHYLENE	CDHS	80.02.14	5.6000	UG/L
		CDHS	80.03.26	4.3000	UG/L
		CDHS	82.02.01	4.3000	UG/L
		CDHS	83.03.06	1.1000	UG/L
		CDHS	83.03.13	1.1000	UG/L
		CDHS	83.03.20	0.9000	UG/L
		CDHS	84.03.09	0.4100	UG/L
		CDHS	84.04.01	0.9000	UG/L
		CDHS	84.08.01	0.7500	UG/L
		CDHS	84.09.04	1.3000	UG/L
		CDHS	84.10.17	1.3000	UG/L
		CDHS	84.11.28	1.0000	UG/L
		JMM LAB	85.01.17	0.8000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	80.0000	UG/L
		CDHS	80.01.14	49.5000	UG/L
		CDHS	80.02.14	42.0000	UG/L
		CDHS	80.03.26	32.0000	UG/L
		CDHS	82.02.01	32.0000	UG/L
		CDHS	83.03.06	5.7000	UG/L
		CDHS	83.03.13	5.5000	UG/L
		CDHS	83.03.20	5.5000	UG/L
		CDHS	84.03.09	7.4000	UG/L
		CDHS	84.04.01	5.5000	UG/L
		CDHS	84.08.01	5.1000	UG/L
		CDHS	84.09.04	7.6000	UG/L
		CDHS	84.10.17	11.0000	UG/L
		CDHS	84.11.28	11.7000	UG/L
		JMM LAB	85.01.17	12.0000	UG/L
01901699	EPA METHOD 624--COMPOUNDS D	S3D	85.04.18	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.04.18	0.0000	
	ACETONE	S3D	85.04.18	12.0000 F	UG/L
	CARBON TETRACHLORIDE	CDHS	81.09.15	0.4300	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01901699	DI-N-BUTYLPHTHALATE	S3D	85.04.18	10.0000 L	UG/L
	DIETHYL PHTHALATE	S3D	85.04.18	10.0000 F	UG/L
	PERCHLOROETHYLENE	CDHS	80.09.05	0.2600	UG/L
		CDHS	81.09.15	5.0000	UG/L
		CDHS	81.09.25	2.3000	UG/L
		CDHS	82.01.26	0.3000	UG/L
		CDHS	82.08.25	3.0000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	1.7000	UG/L
		CDHS	80.09.05	0.4900	UG/L
		CDHS	81.09.15	7.2000	UG/L
		CDHS	81.09.25	2.9000	UG/L
		CDHS	82.01.26	0.6000	UG/L
		CDHS	82.08.25	3.9000	UG/L
		S3D	85.04.18	1.0000	UG/L
01901745	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.22	0.0000	
		S3D	85.05.13	0.0000	
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.04.25	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.22	0.0000	
		S3D	85.05.13	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.22	0.0000	
	TRICHLOROETHYLENE	JMM LAB	85.04.25	1.4000	UG/L
01901747	TRICHLOROETHYLENE	CDHS	80.01.11	2.0000 L	UG/L
01901748	TRICHLOROETHYLENE	CDHS	80.01.11	0.3300	UG/L
		CDHS	81.08.31	0.8800	UG/L
01901749	TRICHLOROETHYLENE	CDHS	80.01.11	0.4500	UG/L
		CDHS	81.08.31	0.6700	UG/L
01902017	1,1,1-TRICHLOROETHANE	JMM LAB	85.01.29	31.0000	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.29	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.29	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.29	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.03.18	0.1000 L	UG/L
	METHYLENE CHLORIDE	JMM LAB	85.01.29	10.0000	UG/L
	PERCHLOROETHYLENE	CDHS	81.03.18	23.0000	UG/L
		CDHS	83.04.13	2.7000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01902017	PERCHLOROETHYLENE	JMM LAB	85.01.29	8.0000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.14	340.0000	UG/L
		CDHS	80.01.16	238.0000	UG/L
		CDHS	81.03.18	311.0000	UG/L
		CDHS	83.04.13	44.4000	UG/L
		CDHS	83.08.10	122.8000	UG/L
		CDHS	84.03.07	80.3000	UG/L
		JMM LAB	85.01.29	98.0000	UG/L
01902018	1,1,1-TRICHLOROETHANE	JMM LAB	85.01.29	54.0000	UG/L
	1,1-DICHLOROETHYLENE	JMM LAB	85.01.29	20.0000	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.29	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.29	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.29	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.03.18	0.1000 L	UG/L
	METHYLENE CHLORIDE	JMM LAB	85.01.29	6.0000	UG/L
	PERCHLOROETHYLENE	CDHS	81.03.18	15.0000	UG/L
		CDHS	83.05.04	1.3000	UG/L
		JMM LAB	85.01.29	6.0000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.14	145.0000	UG/L
		CDHS	80.01.16	225.0000	UG/L
		CDHS	80.01.23	260.0000	UG/L
		CDHS	81.03.18	155.0000	UG/L
		CDHS	83.05.04	25.0000	UG/L
		JMM LAB	85.01.29	140.0000	UG/L
	TOLUENE (=METHYL BENZINE)	JMM LAB	85.01.29	0.1000 L	UG/L
01902019	1,1,1-TRICHLOROETHANE	JMM LAB	85.01.29	8.8000	UG/L
		JMM LAB	85.04.25	29.0000	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.29	0.0000	
		JMM LAB	85.04.25	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.29	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.29	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.10.24	0.1000 L	UG/L
		CDHS	81.03.18	0.1000 L	UG/L
	CHLOROFORM	JMM LAB	85.04.25	0.6000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01902019	PERCHLOROETHYLENE	CDHS	80.02.20	1.3000	UG/L
		CDHS	80.03.24	0.3800	UG/L
		CDHS	80.04.08	0.3000	UG/L
		CDHS	80.04.10	0.3000	UG/L
		CDHS	80.10.24	7.7000	UG/L
		CDHS	81.03.18	12.0000	UG/L
		JMM LAB	85.01.29	1.2000	UG/L
		JMM LAB	85.04.25	1.7000	UG/L
	TRANS-1,2-DICHLOROETHYLENE	JMM LAB	85.04.25	2.4000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.14	6.1000	UG/L
		CDHS	80.01.16	5.1000	UG/L
		CDHS	80.01.17	8.1000	UG/L
		CDHS	80.02.20	13.0000	UG/L
		CDHS	80.03.24	2.3000	UG/L
		CDHS	80.04.08	0.9000	UG/L
		CDHS	80.04.10	1.7000	UG/L
		CDHS	80.06.19	2.6000	UG/L
		CDHS	80.07.10	29.5000	UG/L
		CDHS	80.10.09	59.0000	UG/L
		CDHS	80.10.24	5.2000	UG/L
		CDHS	81.02.05	121.0000	UG/L
		CDHS	81.03.18	110.0000	UG/L
		JMM LAB	85.01.29	31.0000	UG/L
		JMM LAB	85.04.25	25.0000	UG/L
01902020	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.15	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.15	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.15	0.0000	
	PERCHLOROETHYLENE	CDHS	83.04.13	1.0000 L	UG/L
		CDHS	83.05.12	1.0000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.14	0.0300	UG/L
		CDHS	81.07.22	2.4000	UG/L
		CDHS	83.04.13	7.8000	UG/L
		CDHS	83.05.12	14.6000	UG/L
		CDHS	83.08.10	3.6000	UG/L
		CDHS	84.03.07	14.5000	UG/L
01902024	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.15	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.15	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.15	0.0000	
	TRICHLOROETHYLENE	CDHS	80.01.14	0.4500	UG/L
		CDHS	81.07.22	0.5400	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902027	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.29	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.29	0.0000		
	AGRICULTURAL CHEMICALS--DET	JMM LAB	85.01.29	0.0000		
	ATRAZINE (AATREX)	JMM LAB	85.01.29	1.6700		UG/L
	CARBON TETRACHLORIDE	CDHS	80.10.24	0.1000	L	UG/L
		CDHS	81.03.18	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.20	1.5000		UG/L
		CDHS	80.03.24	1.9000		UG/L
		CDHS	80.04.08	2.0000		UG/L
		CDHS	80.04.10	1.0000		UG/L
		CDHS	80.04.14	0.4900		UG/L
		CDHS	80.04.17	0.3000		UG/L
		CDHS	80.10.24	2.4000		UG/L
		CDHS	81.03.18	2.2000		UG/L
		CDHS	83.04.13	1.0000	L	UG/L
		JMM LAB	85.01.29	3.9000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.14	15.7000		UG/L
		CDHS	80.01.17	12.0000		UG/L
		CDHS	80.01.22	8.8000		UG/L
		CDHS	80.02.20	17.0000		UG/L
		CDHS	80.03.24	22.0000		UG/L
		CDHS	80.04.08	16.0000		UG/L
		CDHS	80.04.10	12.0000		UG/L
		CDHS	80.04.14	4.9000		UG/L
		CDHS	80.04.17	3.2000		UG/L
		CDHS	80.06.19	14.7000		UG/L
		CDHS	80.07.10	15.0000		UG/L
		CDHS	80.08.14	6.0000		UG/L
		CDHS	80.10.09	25.8000		UG/L
		CDHS	80.10.24	22.0000		UG/L
		CDHS	81.03.18	20.0000		UG/L
		CDHS	83.04.13	1.0000	L	UG/L
		CDHS	83.08.10	13.1000		UG/L
		CDHS	84.03.07	10.6000		UG/L
		JMM LAB	85.01.29	25.0000		UG/L
01902030	EPA METHOD 624--COMPOUNDS D	S3D	85.05.01	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.05.01	0.0000		
	CARBON TETRACHLORIDE	S3D	85.05.01	1.0000	L	UG/L
	CHLOROFORM	S3D	85.05.01	1.0000		UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.05.01	10.0000	F	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01902030	PERCHLOROETHYLENE	CDHS	81.07.22	0.2000	UG/L
		S3D	85.05.01	1.0000	UG/L
	PHENOLS	S3D	85.05.01	10.0000 F	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.14	0.0300	UG/L
		CDHS	81.07.22	1.6000	UG/L
		S3D	85.05.01	2.9000 F	UG/L
01902032	EPA METHOD 624--NO COMPOUND	S3D	85.04.18	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.04.18	0.0000	
	ACETONE	S3D	85.04.18	10.0000 F	UG/L
	CHLOROFORM	S3D	85.04.18	1.0000	UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.04.18	10.0000 L	UG/L
	DIETHYL PHTHALATE	S3D	85.04.18	10.0000 F	UG/L
	TRICHLOROETHYLENE	S3D	85.04.18	6.6000	UG/L
01902034	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.29	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.29	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.29	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.10.24	0.1000 L	UG/L
		CDHS	82.08.11	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.20	1.1000	UG/L
		CDHS	80.04.08	3.0000	UG/L
		CDHS	80.04.10	2.6000	UG/L
		CDHS	80.04.14	2.7000	UG/L
		CDHS	80.04.17	2.3000	UG/L
		CDHS	80.10.24	2.0000	UG/L
		CDHS	82.08.11	2.8800	UG/L
		CDHS	83.04.13	2.7000	UG/L
		JMM LAB	85.01.29	0.9000	UG/L
	TRICHLOROETHYLENE	CDHS	80.02.20	5.7000	UG/L
		CDHS	80.04.08	7.4000	UG/L
		CDHS	80.04.10	7.2000	UG/L
		CDHS	80.04.14	6.7000	UG/L
		CDHS	80.04.17	7.1000	UG/L
		CDHS	80.06.19	5.6000	UG/L
		CDHS	80.07.10	5.0000	UG/L
		CDHS	80.08.14	1.7000	UG/L
		CDHS	80.10.09	11.9000	UG/L
		CDHS	80.10.24	5.6000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01902034	TRICHLOROETHYLENE	CDHS	80.11.13	8.0000	UG/L
		CDHS	80.12.11	9.9000	UG/L
		CDHS	81.01.08	4.7000	UG/L
		CDHS	81.02.05	5.2000	UG/L
		CDHS	81.06.19	4.9000	UG/L
		CDHS	81.09.10	1.5000	UG/L
		CDHS	81.10.01	0.7100	UG/L
		CDHS	82.03.04	5.4000	UG/L
		CDHS	82.04.11	4.8000	UG/L
		CDHS	82.08.11	6.0500	UG/L
		CDHS	82.10.26	2.6000	UG/L
		CDHS	83.01.06	4.3000	UG/L
		CDHS	83.02.03	5.6000	UG/L
		CDHS	83.03.03	3.1000	UG/L
		CDHS	83.04.07	3.3000	UG/L
		CDHS	83.04.13	3.3000	UG/L
		CDHS	83.05.05	4.6000	UG/L
		CDHS	83.06.02	4.7000	UG/L
		CDHS	83.07.07	8.0000	UG/L
		CDHS	83.08.05	2.0000	UG/L
		CDHS	83.08.10	3.3000	UG/L
		CDHS	84.03.01	2.4000	UG/L
		JMM LAB	85.01.29	3.5000	UG/L
01902035	TRICHLOROETHYLENE	CDHS	80.01.14	0.6600	UG/L
01902077	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.24	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.24	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.24	0.0000	
01902085	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.31	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.31	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.31	0.0000	
01902096	PERCHLOROETHYLENE	CDHS	82.04.16	0.2400	UG/L
01902106	TRICHLOROETHYLENE	CDHS	80.01.11	0.3100	UG/L
01902115	EPA METHOD 624--NO COMPOUND	S3D	85.03.07	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.07	0.0000	
	EPA METHOD 625--COMPOUNDS D	ERG	85.03.07	0.0000	
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.03.07	0.0000	
	BIS(2-ETHYLHEXYL)PHTHALATE	ERG	85.03.07	60.0000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902115	FREON-113	S3D	85.03.07	5.0000	L	UG/L
	HYDRAZINE	CAL	85.03.07	1.0000	L	MG/L
	PERCHLORATE	CAL	85.03.07	0.0000	G	MG/L
	SELENIUM	S3D	85.03.07	4.2000	L	UG/L
	THIOUREA	PED	85.03.07	50.0000	L	UG/L
	XYLIDINE	ERG	85.03.07	25.0000	L	UG/L
01902116	TRICHLOROETHYLENE	CDHS	79.12.27	0.2700		UG/L
		CDHS	80.01.07	0.2000		UG/L
01902117	EPA METHOD 624--NO COMPOUND	S3D	85.03.14	0.0000	L	
	EPA METHOD 625--NO COMPOUND	ERG	85.03.14	0.0000	L	
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.03.14	0.0000	L	
	FREON-113	S3D	85.03.14	5.0000	L	UG/L
	HYDRAZINE	CAL	85.03.14	1.0000	L	MG/L
	PERCHLORATE	CAL	85.03.14	0.0000	G	MG/L
	SELENIUM	S3D	85.03.14	25.0000	L	UG/L
	THIOUREA	PED	85.03.14	50.0000	L	UG/L
	XYLIDINE	ERG	85.03.14	25.0000	L	UG/L
01902148	PERCHLOROETHYLENE	CDHS	80.12.11	0.1200		UG/L
	TRICHLOROETHYLENE	CDHS	80.12.11	0.7200		UG/L
01902149	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.21	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.21	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.21	0.0000		
01902150	PERCHLOROETHYLENE	CDHS	80.12.11	0.1200		UG/L
	TRICHLOROETHYLENE	CDHS	80.12.11	0.6000		UG/L
01902152	TRICHLOROETHYLENE	CDHS	80.01.17	0.0500		UG/L
01902169	EPA METHOD 624--COMPOUNDS D	S3D	85.04.30	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.30	0.0000		

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902169	CHLOROFORM	S3D	85.04.30	1.8000	F	UG/L
	PERCHLOROETHYLENE	S3D	85.04.30	6.0000		UG/L
	TRICHLOROETHYLENE	S3D	85.04.30	1.0000		UG/L
01902241	EPA METHOD 624--NO COMPOUND	S3D	85.04.25	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.25	0.0000		
	PERCHLOROETHYLENE	S3D	85.04.25	1.0000	L	UG/L
	PHENOLS	S3D	85.04.25	10.0000	L	UG/L
	TRICHLOROETHYLENE	S3D	85.04.25	1.0000	F	UG/L
01902270	1,1,1-TRICHLOROETHANE	CDHS	85.07.23	2.1000	L	UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.05.02	0.0000	L	
	EPA METHOD 625--NO COMPOUND	S3D	85.05.02	0.0000		
	CHLOROFORM	S3D	85.05.02	1.0000	L	UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.05.02	10.0000	F	UG/L
	METHYLENE CHLORIDE	S3D	85.05.02	1.0000	F	UG/L
	PERCHLOROETHYLENE	CDHS	80.09.05	0.1800	L	UG/L
		S3D	85.05.02	10.0000		UG/L
		CDHS	85.07.23	7.2000		UG/L
	TRICHLOROETHYLENE	S3D	85.05.02	1.0000	F	UG/L
		CDHS	85.07.23	0.2000		UG/L
01902271	1,1,1-TRICHLOROETHANE	JMM LAB	85.03.21	1.5000		UG/L
		CDHS	85.07.23	1.7000	L	UG/L
	1,1-DICHLOROETHYLENE	JMM LAB	85.03.21	1.1000		UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.03.21	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.21	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.21	0.0000		
	PERCHLOROETHYLENE	CDHS	81.07.07	0.3900		UG/L
		JMM LAB	85.03.21	15.0000		UG/L
		CDHS	85.07.23	5.5000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.17	9.9000		UG/L
		CDHS	81.07.07	1.2000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01902271	TRICHLOROETHYLENE	JMM LAB	85.03.21	2.6000	UG/L
		CDHS	85.07.23	0.2000	UG/L
01902272	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.21	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.21	0.0000	
	AGRICULTURAL CHEMICALS--DET	JMM LAB	85.03.21	0.0000	
	ATRAZINE (AATREX)	JMM LAB	85.03.21	1.3700	UG/L
	PERCHLOROETHYLENE	CDHS	80.09.05	0.2000	UG/L
01902356	EPA METHOD 624--NO COMPOUND	S3D	85.04.17	0.0000 L	
	EPA METHOD 625--NO COMPOUND	S3D	85.04.17	0.0000	
	ACETONE	S3D	85.04.17	10.0000 F	UG/L
	CHLOROFORM	CDHS	80.06.10	2.2000 L	UG/L
	FREON-113	S3D	85.04.17	1.0000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.29	0.0200	UG/L
		CDHS	80.03.10	0.0300	UG/L
		CDHS	80.07.28	0.0200	UG/L
		CDHS	80.12.11	0.1300	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.05	0.8600	UG/L
		CDHS	80.01.30	0.0900	UG/L
		CDHS	80.03.10	0.2800	UG/L
		CDHS	80.12.11	0.4800	UG/L
	XYLIDINE	S3D	85.04.17	50.0000 L	UG/L
01902358	1,1,1-TRICHLOROETHANE	JMM LAB	85.01.24	0.5000	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.24	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.24	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.24	0.0000	
	CARBON TETRACHLORIDE	CDHS	82.03.25	0.1000	UG/L
		CDHS	82.08.06	0.1100	UG/L
	PERCHLOROETHYLENE	CDHS	82.03.25	0.1000	UG/L
		CDHS	82.08.06	0.1300	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	0.4300	UG/L
		CDHS	81.08.27	0.4300	UG/L
		CDHS	82.03.25	0.7000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902358	TRICHLOROETHYLENE	CDHS	82.08.06	0.7500		UG/L
01902424	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.08	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.08	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.08	0.0000		
01902425	EPA METHOD 624--NO COMPOUND	S3D	85.03.07	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.07	0.0000		
	EPA METHOD 625--COMPOUNDS D	ERG	85.03.07	0.0000		
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.03.07	0.0000		
	BIS(2-ETHYLHEXYL)PHTHALATE	ERG	85.03.07	60.0000		UG/L
	FREON-113	S3D	85.03.07	5.0000	L	UG/L
	HYDRAZINE	CAL	85.03.07	1.0000	L	MG/L
	PERCHLOROETHYLENE	CDHS	80.03.11	0.0600		UG/L
		CDHS	80.04.03	0.0400		UG/L
		CDHS	80.06.20	0.0200		UG/L
		CDHS	80.08.04	0.0300		UG/L
	PERCHLORATE	CAL	85.03.07	0.0000	G	MG/L
	SELENIUM	S3D	85.03.07	25.0000	L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	4.5000		UG/L
		CDHS	80.03.11	0.0300		UG/L
		CDHS	80.04.03	0.0300		UG/L
	THIOUREA	PED	85.03.07	50.0000	L	UG/L
	XYLIDINE	ERG	85.03.07	25.0000	L	UG/L
01902458	TRICHLOROETHYLENE	CDHS	80.01.05	0.0300		UG/L
01902461	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.29	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.29	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.29	0.0000		
	PERCHLOROETHYLENE	CDHS	81.07.22	0.4300		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.14	0.7300		UG/L
		CDHS	81.07.22	0.4100		UG/L
		JMM LAB	85.01.29	3.2000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01902519	EPA METHOD 624--NO COMPOUND	S3D	85.05.07	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.05.07	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.01.15	0.2900	UG/L
		CDHS	81.09.02	0.2200	UG/L
		CDHS	82.07.20	0.1900	UG/L
	PERCHLOROETHYLENE	CDHS	81.01.15	0.1000 L	UG/L
		CDHS	81.09.02	0.1000 L	UG/L
		CDHS	81.09.25	0.1000	UG/L
		CDHS	82.07.20	0.1300	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.16	0.8400	UG/L
		CDHS	81.01.15	3.4000	UG/L
		CDHS	81.09.02	4.9000	UG/L
		CDHS	81.09.25	6.0000	UG/L
		CDHS	82.07.16	3.7000	UG/L
		CDHS	82.07.20	3.3800	UG/L
		CDHS	83.06.21	2.0000	UG/L
01902533	PERCHLOROETHYLENE	CDHS	80.12.11	0.2800	UG/L
		CDHS	81.01.12	0.1200	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.05	0.0200	UG/L
		CDHS	80.12.11	0.9500	UG/L
01902535	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.07	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.07	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.07	0.0000	
01902536	EPA METHOD 624--COMPOUNDS D	S3D	85.04.16	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.04.16	0.0000	
	CHLOROFORM	S3D	85.04.16	1.0000	UG/L
	FREON-113	S3D	85.04.16	1.0000 L	UG/L
	HYDRAZINE	CAL	85.04.16	1.0000 L	MG/L
	METHYLENE CHLORIDE	S3D	85.04.16	4.7000 L	UG/L
	PERCHLORATE	CAL	85.04.16	0.0000 G	MG/L
	SELENIUM	CAL	85.04.16	5.0000 L	UG/L
	THIOUREA	PED	85.04.16	10.0000 L	UG/L
	XYLIDINE	S3D	85.04.16	50.0000 L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902537	EPA METHOD 624--NO COMPOUND	S3D	85.03.07	0.0000		
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.03.07	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.07	0.0000		
	EPA METHOD 625--COMPOUNDS D	ERG	85.03.07	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.07	0.0000		
	BIS(2-ETHYLHEXYL)PHTHALATE	ERG	85.03.07	60.0000		UG/L
	CARBON TETRACHLORIDE	CDHS	81.06.19	0.1000	L	UG/L
	FREON-113	S3D	85.03.07	5.0000	L	UG/L
	HYDRAZINE	CAL	85.03.07	1.0000	L	MG/L
	PERCHLOROETHYLENE	CDHS	80.02.28	12.0000		UG/L
		CDHS	80.04.02	51.0000		UG/L
		CDHS	80.04.16	95.0000		UG/L
		CDHS	80.07.08	35.0000		UG/L
		CDHS	81.06.19	2.3000		UG/L
		CDHS	81.06.30	9.9000		UG/L
		CDHS	82.12.06	0.2000	L	UG/L
	PERCHLORATE	CAL	85.03.07	0.0000	G	MG/L
	SELENIUM	S3D	85.03.07	4.2000	L	UG/L
	TRICHLOROETHYLENE	CDHS	79.12.27	250.0000		UG/L
		CDHS	80.01.05	64.0000		UG/L
		CDHS	80.01.09	3.3000		UG/L
		CDHS	80.01.14	9.7000		UG/L
		CDHS	80.01.23	36.0000		UG/L
		CDHS	80.02.28	27.0000		UG/L
		CDHS	80.04.02	93.0000		UG/L
		CDHS	80.04.16	180.0000		UG/L
		CDHS	80.07.08	129.0000		UG/L
		CDHS	81.06.19	12.9000		UG/L
		CDHS	81.06.22	14.5000		UG/L
		CDHS	81.06.30	33.1000		UG/L
		CDHS	81.08.19	28.0000		UG/L
		CDHS	81.10.13	34.0000		UG/L
		CDHS	82.12.06	2.0000		UG/L
		CDHS	83.01.10	3.5000		UG/L
		CDHS	83.03.22	1.8000		UG/L
		CDHS	83.04.05	2.0000		UG/L
		CDHS	83.04.28	2.8000		UG/L
		CDHS	83.05.03	3.5000		UG/L
		JMM LAB	85.03.07	1.3000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902537	THIOUREA	PED	85.03.07	10.0000	L	UG/L
	XYLIDINE	ERG	85.03.07	25.0000	L	UG/L
01902538	TRICHLOROETHYLENE	CDHS	80.01.07	0.0700		UG/L
01902581	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.05	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.05	0.0000		
	AGRICULTURAL CHEMICALS--DET	JMM LAB	85.02.05	0.0000		
	ATRAZINE (AATREX)	JMM LAB	85.02.05	1.1300		UG/L
	CARBON TETRACHLORIDE	CDHS	80.09.10	0.0500	L	UG/L
		CDHS	81.09.15	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.04.09	9.0000		UG/L
		CDHS	80.09.10	6.6000		UG/L
		CDHS	81.09.15	1.6000		UG/L
		JMM LAB	85.02.05	1.5000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	35.0000		UG/L
		CDHS	80.01.12	40.0000		UG/L
		CDHS	80.04.09	2.0000		UG/L
		CDHS	80.09.10	12.0000		UG/L
		CDHS	81.09.15	0.2100		UG/L
		JMM LAB	85.02.05	0.9000		UG/L
01902582	CARBON TETRACHLORIDE	CDHS	81.09.15	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.06.16	15.0000		UG/L
		CDHS	81.04.09	10.0000		UG/L
		CDHS	81.09.15	0.1000	L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	11.5000		UG/L
		CDHS	80.01.12	12.0000		UG/L
		CDHS	80.01.15	19.0000		UG/L
		CDHS	80.04.15	14.0000		UG/L
		CDHS	80.06.16	3.3000		UG/L
		CDHS	81.04.09	2.3000		UG/L
		CDHS	81.09.15	0.1000	L	UG/L
01902583	CARBON TETRACHLORIDE	CDHS	80.12.16	0.1100		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	0.0200		UG/L
		CDHS	80.12.16	0.2500		UG/L
01902589	EPA METHOD 624--NO COMPOUND	S3D	85.04.30	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.30	0.0000		

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902589	DI-N-BUTYLPHTHALATE	S3D	85.04.30	10.0000	F	UG/L
	METHYLENE CHLORIDE	S3D	85.04.30	1.0000	F	UG/L
	TRICHLOROETHYLENE	S3D	85.04.30	1.0000	L	UG/L
01902612	1,1,1-TRICHLOROETHANE	JMM LAB	85.01.17	0.3000		UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.17	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.17	0.0000		
	AGRICULTURAL CHEMICALS--DET	JMM LAB	85.01.17	0.0000		
	ATRAZINE (AATREX)	JMM LAB	85.01.17	1.0800		UG/L
	PERCHLOROETHYLENE	JMM LAB	85.01.17	1.4000		UG/L
	TRICHLOROETHYLENE	JMM LAB	85.01.17	2.0000		UG/L
01902663	EPA METHOD 624--COMPOUNDS D	S3D	85.04.23	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.23	0.0000		
	PHENOLS	S3D	85.04.23	10.0000	F	UG/L
	TRICHLOROETHYLENE	S3D	85.04.23	1.0000		UG/L
01902689	TRICHLOROETHYLENE	CDHS	80.01.11	4.1000		UG/L
		CDHS	80.01.15	2.8000		UG/L
01902690	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.10	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.10	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.10	0.0000		
	TRICHLOROETHYLENE	CDHS	80.01.12	0.0400		UG/L
01902763	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.12	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.12	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.12	0.0000		
	CARBON TETRACHLORIDE	CDHS	80.09.10	0.3100		UG/L
		CDHS	81.01.15	0.2300		UG/L
		CDHS	81.09.03	0.1300		UG/L
		CDHS	82.07.20	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.04.17	0.2000	L	UG/L
		CDHS	80.04.18	0.2000	L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01902763	PERCHLOROETHYLENE	CDHS	80.04.22	0.2000 L	UG/L
		CDHS	80.09.10	0.1000 L	UG/L
		CDHS	81.01.15	0.1000 L	UG/L
		CDHS	81.09.03	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	8.8000	UG/L
		CDHS	80.01.11	7.6000	UG/L
		CDHS	80.01.14	8.8000	UG/L
		CDHS	80.02.06	7.1000	UG/L
		CDHS	80.02.29	12.2000	UG/L
		CDHS	80.03.04	6.4000	UG/L
		CDHS	80.04.10	8.6000	UG/L
		CDHS	80.04.15	7.7000	UG/L
		CDHS	80.04.17	9.1000	UG/L
		CDHS	80.04.18	10.0000	UG/L
		CDHS	80.04.22	7.0000	UG/L
		CDHS	80.04.28	7.4000	UG/L
		CDHS	80.08.05	5.6000	UG/L
		CDHS	80.09.10	5.2000	UG/L
		CDHS	80.11.18	5.0000	UG/L
		CDHS	81.01.15	2.5000	UG/L
		CDHS	81.06.25	1.5000	UG/L
		CDHS	81.09.03	0.8400	UG/L
		CDHS	82.01.21	0.5000	UG/L
		CDHS	82.07.16	0.1000	UG/L
		CDHS	82.07.20	0.2800	UG/L
		CDHS	83.06.15	0.5000	UG/L
01902786	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.10	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.10	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.10	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.08.31	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.08.31	7.5000	UG/L
		CDHS	81.09.10	7.6000	UG/L
		CDHS	81.09.25	7.1000	UG/L
		JMM LAB	85.01.10	1.6000	UG/L
		CDHS	85.03.21	3.3000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	0.0900	UG/L
		CDHS	81.08.31	0.1000 L	UG/L
01902787	PERCHLOROETHYLENE	CDHS	85.03.21	0.8600	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.1000	UG/L
		CDHS	85.03.21	9.6000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902789	CARBON TETRACHLORIDE	CDHS	80.08.29	0.0500		UG/L
		CDHS	80.10.24	0.1000		UG/L
		CDHS	81.08.27	0.1000		UG/L
		CDHS	81.09.04	0.1000		UG/L
		CDHS	83.05.06	0.0500	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.08.29	0.7500		UG/L
		CDHS	80.10.24	0.5400		UG/L
		CDHS	81.07.08	0.3000		UG/L
		CDHS	81.08.27	1.7000		UG/L
		CDHS	81.09.04	1.8000		UG/L
		CDHS	82.08.06	5.8000		UG/L
		CDHS	83.05.06	3.0000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	1.5000		UG/L
		CDHS	80.01.23	1.0000		UG/L
		CDHS	80.08.29	0.3900		UG/L
		CDHS	80.10.24	0.3200		UG/L
		CDHS	81.08.27	10.0000		UG/L
		CDHS	81.09.04	13.0000		UG/L
		CDHS	82.08.06	47.0000		UG/L
		CDHS	83.05.06	29.0000		UG/L
01902791	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.24	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.24	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.24	0.0000		
01902792	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.03	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000		
01902806	EPA METHOD 624--COMPOUNDS D	S3D	85.04.25	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.25	0.0000		
	CARBON TETRACHLORIDE	CDHS	82.07.12	0.1000		UG/L
		CDHS	83.07.12	0.1000		UG/L
		CDHS	83.10.26	0.1000	L	UG/L
		CDHS	83.12.21	0.5000	L	UG/L
	CHLOROFORM	CDHS	82.07.12	2.2000	L	UG/L
	PERCHLOROETHYLENE	CDHS	81.03.17	33.4000		UG/L
		CDHS	81.03.25	24.0000		UG/L
		CDHS	81.05.11	47.0000		UG/L
		CDHS	81.06.01	51.0000		UG/L
		CDHS	82.04.30	184.0000		UG/L
		CDHS	82.05.07	108.0000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902806	PERCHLOROETHYLENE	CDHS	82.07.12	134.0000		UG/L
		CDHS	82.09.01	162.0000		UG/L
		CDHS	82.12.08	27.5000		UG/L
		CDHS	82.12.14	50.0000		UG/L
		CDHS	83.07.12	36.2000		UG/L
		CDHS	83.10.26	26.3000		UG/L
		CDHS	83.12.21	27.7000		UG/L
		CDHS	84.01.26	9.1000		UG/L
		CDHS	84.03.05	6.2000		UG/L
		CDHS	84.03.06	9.4000		UG/L
		CDHS	84.03.07	11.0000		UG/L
		CDHS	84.04.27	9.5000		UG/L
		CDHS	85.03.22	13.0000		UG/L
		S3D	85.04.25	8.3000		UG/L
	PHENOLS	S3D	85.04.25	10.0000	F	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	3.0000		UG/L
		CDHS	80.01.23	2.0000		UG/L
		CDHS	81.03.17	0.5100		UG/L
		CDHS	81.06.01	0.5700		UG/L
		CDHS	82.05.07	0.3000		UG/L
		CDHS	82.07.12	0.1000		UG/L
		CDHS	82.09.01	0.5000	L	UG/L
		CDHS	82.12.14	0.1000	L	UG/L
		CDHS	83.07.12	0.1000		UG/L
		CDHS	83.10.26	0.1000	L	UG/L
		CDHS	83.12.21	0.5000	L	UG/L
		S3D	85.04.25	1.0000	F	UG/L
01902816	EPA METHOD 624--NO COMPOUND	S3D	85.05.01	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.05.01	0.0000		
	CHLOROFORM	S3D	85.05.01	1.0000	L	UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.05.01	10.0000	F	UG/L
	PHENOLS	S3D	85.05.01	10.0000	L	UG/L
	TRICHLOROETHYLENE	S3D	85.05.01	1.0000	L	UG/L
01902818	TRICHLOROETHYLENE	CDHS	80.01.12	0.0600		UG/L
01902854	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.24	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.24	0.0000		
	AGRICULTURAL CHEMICALS--DET	JMM LAB	85.01.24	0.0000		
	PERCHLOROETHYLENE	CDHS	80.08.27	0.2800		UG/L
		CDHS	80.08.29	0.1000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01902854	PERCHLOROETHYLENE	CDHS	81.10.06	0.6000	UG/L
		CDHS	81.11.17	0.3000	UG/L
		CDHS	81.12.28	0.6000	UG/L
		CDHS	82.03.16	0.2000	UG/L
		CDHS	82.08.06	0.1000	UG/L
	SIMAZINE (PRINCEP)	JMM LAB	85.01.24	0.7500	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	0.0200	UG/L
		CDHS	81.10.06	0.2000	UG/L
		CDHS	81.11.17	0.1000 L	UG/L
		CDHS	82.08.06	0.2800	UG/L
01902859	EPA METHOD 624--COMPOUNDS D	S3D	85.05.02	0.0000	
	EPA METHOD 625--COMPOUNDS D	S3D	85.05.02	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.09.10	0.1400	UG/L
		CDHS	81.01.13	0.0700	UG/L
	CHLOROFORM	S3D	85.05.02	1.0000 F	UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.05.02	10.0000 F	UG/L
	METHYLENE CHLORIDE	S3D	85.05.02	1.0000 F	UG/L
	PERCHLOROETHYLENE	CDHS	80.09.10	2.6000	UG/L
		CDHS	81.01.13	2.6000	UG/L
		CDHS	85.04.01	6.3000	UG/L
		CDHS	85.04.11	2.2000	UG/L
		S3D	85.05.02	3.5000	UG/L
	PHENOLS	S3D	85.05.02	10.0000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	0.7700	UG/L
		CDHS	80.09.10	0.9500	UG/L
		CDHS	81.01.13	0.8000	UG/L
		CDHS	85.04.01	5.9000	UG/L
		CDHS	85.04.11	1.2000	UG/L
		S3D	85.05.02	3.3000 F	UG/L
01902907	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.07	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.07	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.07	0.0000	
	CARBON TETRACHLORIDE	CDHS	82.08.19	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	82.08.19	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	81.08.28	0.2100	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902907	TRICHLOROETHYLENE	CDHS	82.08.19	0.1000	L	UG/L
01902920	EPA METHOD 624--COMPOUNDS D	S3D	85.04.24	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.24	0.0000		
	ACETONE	S3D	85.04.24	10.0000	F	UG/L
	TRICHLOROETHYLENE	S3D	85.04.24	1.0000		UG/L
01902948	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.29	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.29	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.29	0.0000		
	CARBON TETRACHLORIDE	CDHS	81.03.18	0.1000	L	UG/L
		CDHS	82.08.11	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.20	3.6000		UG/L
		CDHS	80.03.24	3.4000		UG/L
		CDHS	80.04.08	3.4000		UG/L
		CDHS	80.04.10	2.6000		UG/L
		CDHS	80.04.14	2.8000		UG/L
		CDHS	80.04.17	2.4000		UG/L
		CDHS	81.03.18	3.3000		UG/L
		CDHS	82.08.11	2.1400		UG/L
		CDHS	83.04.13	1.2000		UG/L
		JMM LAB	85.01.29	1.4000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.14	12.0000		UG/L
		CDHS	80.01.17	3.9000		UG/L
		CDHS	80.01.22	9.3000		UG/L
		CDHS	80.02.20	16.0000		UG/L
		CDHS	80.03.24	16.0000		UG/L
		CDHS	80.04.08	14.0000		UG/L
		CDHS	80.04.10	12.0000		UG/L
		CDHS	80.04.14	12.0000		UG/L
		CDHS	80.04.17	13.0000		UG/L
		CDHS	80.06.19	12.4000		UG/L
		CDHS	80.07.10	12.9000		UG/L
		CDHS	80.08.14	1.5000		UG/L
		CDHS	80.11.13	10.0000		UG/L
		CDHS	81.03.18	11.0000		UG/L
		CDHS	82.08.11	10.1600		UG/L
		CDHS	83.04.13	5.0000		UG/L
		CDHS	83.08.10	7.1000		UG/L
		CDHS	84.03.07	7.3000		UG/L
		JMM LAB	85.01.29	9.1000		UG/L
01902951	EPA METHOD 624--COMPOUNDS D	S3D	85.05.09	0.0000		

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01902951	EPA METHOD 625--NO COMPOUND	S3D	85.05.09	0.0000		
	PERCHLOROETHYLENE	S3D	85.05.09	134.0000		UG/L
	TRICHLOROETHYLENE	S3D	85.05.09	11.0000		UG/L
01902967	EPA METHOD 624--COMPOUNDS D	S3D	85.05.01	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.05.01	0.0000		
	CARBON TETRACHLORIDE	S3D	85.05.01	1.0000		UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.05.01	10.0000	F	UG/L
	METHYLENE CHLORIDE	S3D	85.05.01	1.0000	F	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.2100		UG/L
01903006	EPA METHOD 624--COMPOUNDS D	S3D	85.04.24	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.24	0.0000		
	TRICHLOROETHYLENE	S3D	85.04.24	1.0000		UG/L
01903014	TRICHLOROETHYLENE	CDHS	80.01.11	2.0000	L	UG/L
01903018	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.07	0.0000		
	CARBON TETRACHLORIDE	CDHS	82.08.19	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	81.08.28	0.1000		UG/L
		CDHS	82.08.19	0.1000	L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.09	0.2000		UG/L
		CDHS	82.08.19	0.1000	L	UG/L
01903019	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.08	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.08	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.08	0.0000		
01903033	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.04.25	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.10	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.10	0.0000		

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01903033	PERCHLOROETHYLENE	CDHS	80.10.09	0.2400		UG/L
		CDHS	81.07.10	0.2100		UG/L
		CDHS	82.08.18	0.2500		UG/L
		JMM LAB	85.01.10	0.5000	L	UG/L
		JMM LAB	85.04.25	0.8000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	1.6000		UG/L
		CDHS	80.01.23	1.3000		UG/L
		CDHS	80.10.09	0.7700		UG/L
		CDHS	81.07.10	0.8600		UG/L
		CDHS	82.08.18	1.0500		UG/L
		JMM LAB	85.01.10	1.3000		UG/L
		JMM LAB	85.04.25	1.9000		UG/L
01903057	TRICHLOROETHYLENE	CDHS	80.01.11	0.1000		UG/L
01903062	EPA METHOD 624--NO COMPOUND	S3D	85.04.25	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.25	0.0000		
01903067	EPA METHOD 624--NO COMPOUND	S3D	85.03.19	0.0000		
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.03.19	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.19	0.0000		
	EPA METHOD 625--COMPOUNDS D	ERG	85.03.19	0.0000		
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.03.19	0.0000		
	BIS(2-ETHYLHEXYL)PHTHALATE	ERG	85.03.19	34.0000		UG/L
	CARBON TETRACHLORIDE	CDHS	80.09.10	0.4500		UG/L
		CDHS	81.01.15	0.1000	L	UG/L
		CDHS	81.04.03	0.9700		UG/L
		CDHS	82.07.20	2.2000		UG/L
		CDHS	82.09.03	0.3500		UG/L
	CHLOROFORM	JMM LAB	85.03.19	0.7000		UG/L
	FREON-113	S3D	85.03.19	5.0000	L	UG/L
	METHYLENE CHLORIDE	S3D	85.03.19	1.0000	F	UG/L
	PERCHLOROETHYLENE	CDHS	80.03.12	0.2200		UG/L
		CDHS	80.04.10	0.2600		UG/L
		CDHS	80.04.15	0.3200		UG/L
		CDHS	80.09.10	0.6600		UG/L
		CDHS	81.01.15	0.7900		UG/L
		CDHS	81.04.03	0.1800		UG/L
		CDHS	82.07.20	0.1600		UG/L
		CDHS	82.09.03	0.1000	L	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01903067	PERCHLOROETHYLENE	CDHS	82.10.06	0.2000		UG/L
		JMM LAB	85.03.19	0.7000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	0.5700		UG/L
		CDHS	80.03.12	5.6000		UG/L
		CDHS	80.04.10	5.5000		UG/L
		CDHS	80.04.15	5.0000		UG/L
		CDHS	80.04.28	4.4000		UG/L
		CDHS	80.08.05	5.9000		UG/L
		CDHS	80.08.06	5.9000		UG/L
		CDHS	80.09.10	5.4000		UG/L
		CDHS	81.01.15	0.7300		UG/L
		CDHS	81.04.03	7.9000		UG/L
		CDHS	81.06.25	11.8000		UG/L
		CDHS	81.07.22	12.6000		UG/L
		CDHS	82.01.21	9.8000		UG/L
		CDHS	82.07.20	2.0600		UG/L
		CDHS	82.07.30	2.6400		UG/L
		CDHS	82.08.09	0.5100		UG/L
		CDHS	82.08.16	1.9400		UG/L
		CDHS	82.08.25	10.2000		UG/L
		CDHS	82.09.03	5.5000		UG/L
		CDHS	82.09.24	1.8000		UG/L
		CDHS	82.10.06	6.4000		UG/L
		CDHS	83.02.10	5.8000		UG/L
		CDHS	83.04.19	6.7000		UG/L
		CDHS	83.06.21	6.9000		UG/L
		JMM LAB	85.03.19	1.4000		UG/L
	XYLIDINE	ERG	85.03.19	25.0000	L	UG/L
01903084	EPA METHOD 624--NO COMPOUND	S3D	85.05.09	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.05.09	0.0000		
	PHENOLS	S3D	85.05.09	4.0000	F	UG/L
01903088	EPA METHOD 624--COMPOUNDS D	S3D	85.04.24	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.24	0.0000		
	ACETONE	S3D	85.04.24	10.0000	F	UG/L
	TRICHLOROETHYLENE	S3D	85.04.24	1.0000		UG/L
01903097	1,1-DICHLOROETHYLENE	CDHS	85.02.21	0.1000	L	UG/L
	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.03	0.0000		
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.21	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000		

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01903097	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.06.30	0.2800	UG/L
		JMM LAB	85.02.21	0.6000	UG/L
	PERCHLOROETHYLENE	CDHS	85.02.21	1.0000 L	UG/L
	TRICHLOROETHYLENE	CDHS	81.06.30	0.8400	UG/L
		CDHS	82.08.24	1.0500	UG/L
		CDHS	85.02.21	1.0000 L	UG/L
01903137	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.17	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.17	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.17	0.0000	
01940104	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.14	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.14	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.14	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.05.04	0.0500 L	UG/L
		CDHS	82.08.11	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.04.06	0.1000	UG/L
		CDHS	81.05.04	0.1000 L	UG/L
		CDHS	81.06.02	0.1000	UG/L
		CDHS	81.07.07	0.1000 L	UG/L
		CDHS	81.08.04	0.2000	UG/L
		CDHS	81.09.01	0.0100 L	UG/L
		CDHS	81.10.06	0.1000	UG/L
		CDHS	81.11.03	0.1000	UG/L
		CDHS	81.12.01	0.1000	UG/L
		CDHS	82.01.05	0.1000	UG/L
		CDHS	82.02.02	0.1000 L	UG/L
		CDHS	82.03.01	0.1000	UG/L
		CDHS	82.04.06	0.1000 L	UG/L
		CDHS	82.05.03	0.1000	UG/L
		CDHS	82.06.01	0.1000	UG/L
		CDHS	82.07.06	0.1000	UG/L
		CDHS	82.08.03	0.1000	UG/L
		CDHS	82.08.11	0.1000 L	UG/L
		CDHS	82.09.01	0.2000	UG/L
		CDHS	82.10.04	0.1000 L	UG/L
		CDHS	82.11.02	0.3000 L	UG/L
		CDHS	82.11.30	0.1000 L	UG/L
		CDHS	82.12.01	0.1000 L	UG/L
		CDHS	83.01.04	0.2000	UG/L
		CDHS	83.02.01	0.1000	UG/L
		CDHS	83.03.02	0.1000 L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
01940104	PERCHLOROETHYLENE	CDHS	83.04.04	0.1000	UG/L
		CDHS	83.05.02	0.1000 L	UG/L
		CDHS	83.06.01	0.1000	UG/L
		CDHS	83.07.01	0.1000 L	UG/L
		CDHS	83.08.01	0.1000	UG/L
		CDHS	83.09.01	0.1000	UG/L
		CDHS	83.10.01	0.1000	UG/L
		CDHS	83.11.01	0.1000	UG/L
		CDHS	83.12.01	0.1000	UG/L
		CDHS	84.01.01	0.1000	UG/L
		CDHS	84.02.01	0.1000	UG/L
		CDHS	84.03.01	0.1000	UG/L
		CDHS	84.04.01	0.1000	UG/L
		CDHS	84.05.01	0.1000	UG/L
		CDHS	84.06.01	0.1000	UG/L
		CDHS	84.08.01	0.1000 L	UG/L
		CDHS	84.09.01	0.1300	UG/L
		CDHS	84.10.01	0.1000 L	UG/L
		CDHS	84.11.01	0.1000 L	UG/L
		CDHS	84.12.01	0.2000	UG/L
		CDHS	85.01.01	0.1000 L	UG/L
		CDHS	85.02.01	0.1000 L	UG/L
		CDHS	85.03.01	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0400	UG/L
		CDHS	80.08.12	0.0900	UG/L
		CDHS	80.10.01	0.1000 L	UG/L
		CDHS	80.11.05	0.1000 L	UG/L
		CDHS	80.12.03	0.1000 L	UG/L
		CDHS	81.01.06	0.1000 L	UG/L
		CDHS	81.02.03	0.2000	UG/L
		CDHS	81.03.03	0.1000 L	UG/L
		CDHS	81.04.06	0.1000 L	UG/L
		CDHS	81.05.04	0.1000 L	UG/L
		CDHS	81.06.02	0.1000	UG/L
		CDHS	81.07.07	0.1000 L	UG/L
		CDHS	81.08.04	0.1000 L	UG/L
		CDHS	81.09.01	0.0100 L	UG/L
		CDHS	81.10.06	0.1000	UG/L
		CDHS	81.11.03	0.1000 L	UG/L
		CDHS	81.12.01	0.1000 L	UG/L
		CDHS	82.01.05	0.1000 L	UG/L
		CDHS	82.02.02	0.1000 L	UG/L
		CDHS	82.03.01	0.1000	UG/L
		CDHS	82.04.06	0.1000 L	UG/L
		CDHS	82.05.03	0.1000	UG/L
		CDHS	82.06.01	0.1000	UG/L
		CDHS	82.07.06	0.1000	UG/L
		CDHS	82.08.03	0.1000	UG/L
		CDHS	82.08.11	0.1000 L	UG/L
		CDHS	82.09.01	0.2000	UG/L
		CDHS	82.10.04	0.1000 L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
01940104	TRICHLOROETHYLENE	CDHS	82.11.02	0.3000	L	UG/L
		CDHS	82.11.30	0.1000	L	UG/L
		CDHS	82.12.01	0.1000	L	UG/L
		CDHS	83.01.04	0.1000		UG/L
		CDHS	83.02.01	0.1000		UG/L
		CDHS	83.03.02	0.1000	L	UG/L
		CDHS	83.04.04	0.1000	L	UG/L
		CDHS	83.05.02	0.1000	L	UG/L
		CDHS	83.06.01	0.1000	L	UG/L
		CDHS	83.07.01	0.1000	L	UG/L
		CDHS	83.08.01	0.1000	L	UG/L
		CDHS	83.09.01	0.1000	L	UG/L
		CDHS	83.10.01	0.1000	L	UG/L
		CDHS	83.11.01	0.1000	L	UG/L
		CDHS	83.12.01	0.1000	L	UG/L
		CDHS	84.01.01	0.1000	L	UG/L
		CDHS	84.02.01	0.1000	L	UG/L
		CDHS	84.03.01	0.1000	L	UG/L
		CDHS	84.04.01	0.1000		UG/L
		CDHS	84.05.01	0.1000	L	UG/L
		CDHS	84.06.01	0.1000	L	UG/L
		CDHS	84.08.01	0.1000	L	UG/L
		CDHS	84.09.01	0.1000	L	UG/L
		CDHS	84.10.01	0.1000	L	UG/L
		CDHS	84.11.01	0.1000	L	UG/L
		CDHS	84.12.01	0.1000	L	UG/L
		CDHS	85.01.01	0.1000	L	UG/L
		CDHS	85.02.01	0.1000	L	UG/L
		CDHS	85.03.01	0.1000	L	UG/L
08000004	TRICHLOROETHYLENE	CDHS	80.01.11	0.0700		UG/L
08000012	EPA METHOD 624--COMPOUNDS D	S3D	85.04.18	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.18	0.0000		
	ACETONE	S3D	85.04.18	10.0000	F	UG/L
	CHLOROFORM	S3D	85.04.18	1.0000		UG/L
	DIETHYL PHTHALATE	S3D	85.04.18	10.0000	L	UG/L
08000039	EPA METHOD 624--COMPOUNDS D	S3D	85.02.12	0.0000		
	EPA METHOD 625--NO COMPOUND	ERG	85.02.12	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.12	0.0000		
	CARBON TETRACHLORIDE	CDHS	82.06.09	41.0000		UG/L
		CDHS	82.07.06	33.0000		UG/L
		CDHS	82.07.14	26.6000		UG/L
		CDHS	82.07.19	26.5000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
08000039	CARBON TETRACHLORIDE	CDHS	82.07.21	48.0000		UG/L
		CDHS	83.02.10	19.0000		UG/L
		CDHS	83.04.08	20.3000		UG/L
		CDHS	83.06.06	20.0000		UG/L
		S3D	85.02.12	9.0000		UG/L
	FREON-113	S3D	85.02.12	5.0000	L	UG/L
	TRICHLOROETHYLENE	JMM LAB	85.02.12	0.3000		UG/L
	XYLIDINE	ERG	85.02.12	25.0000	L	UG/L
08000046	EPA METHOD 624--NO COMPOUND	S3D	85.04.23	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.23	0.0000		
08000047	EPA METHOD 624--NO COMPOUND	S3D	85.04.23	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.23	0.0000		
08000048	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.03	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.03	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.03	0.0000		
08000049	1,1,1-TRICHLOROETHANE	S3D	85.04.25	7.5000		UG/L
	1,1-DICHLOROETHYLENE	S3D	85.04.25	1.0000		UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.04.25	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.25	0.0000		
	BIS(2-ETHYLHEXYL)PHTHALATE	S3D	85.04.25	10.0000	L	UG/L
	CHLOROFORM	S3D	85.04.25	1.0000	F	UG/L
	METHYLENE CHLORIDE	S3D	85.04.25	1.0000	L	UG/L
	PERCHLOROETHYLENE	S3D	85.04.25	33.0000		UG/L
	PHENOLS	S3D	85.04.25	10.0000	L	UG/L
	TRANS-1,2-DICHLOROETHYLENE	S3D	85.04.25	1.0000	L	UG/L
	TRICHLOROETHYLENE	S3D	85.04.25	7.1000		UG/L
08000051	CARBON TETRACHLORIDE	CDHS	83.02.02	10.0000		UG/L
		CDHS	84.01.01	1.0000	L	UG/L
		CDHS	84.02.01	1.0000	L	UG/L
		CDHS	84.04.01	1.1000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
08000051	CARBON TETRACHLORIDE	CDHS	84.05.01	1.3000		UG/L
		CDHS	84.08.01	1.0000	L	UG/L
		CDHS	84.09.01	1.0000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.03.11	0.0300		UG/L
		CDHS	80.08.04	0.0200		UG/L
		CDHS	83.02.02	5.0000		UG/L
		CDHS	84.01.01	2.5000		UG/L
		CDHS	84.02.01	3.0000		UG/L
		CDHS	84.04.01	3.1000		UG/L
		CDHS	84.05.01	1.2000		UG/L
		CDHS	84.08.01	1.7000		UG/L
		CDHS	84.09.01	2.6000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	0.0600		UG/L
		CDHS	80.03.11	0.2700		UG/L
		CDHS	83.02.02	3.0000		UG/L
		CDHS	84.01.01	1.3000		UG/L
		CDHS	84.02.01	1.7000		UG/L
		CDHS	84.04.01	1.7000		UG/L
		CDHS	84.05.01	3.2000		UG/L
		CDHS	84.08.01	1.0000	L	UG/L
		CDHS	84.09.01	2.1000		UG/L
08000055	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.12	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.12	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.12	0.0000		
08000060	1,1,1-TRICHLOROETHANE	S3D	85.04.23	170.0000		UG/L
	1,1-DICHLOROETHYLENE	S3D	85.04.23	96.0000		UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.04.23	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.04.23	0.0000		
	ACETONE	S3D	85.04.23	100.0000		UG/L
	CARBON TETRACHLORIDE	CDHS	81.03.18	1.6000		UG/L
		CDHS	82.04.22	1.5000		UG/L
		CDHS	83.06.06	0.1000	L	UG/L
	CHLOROFORM	S3D	85.04.23	10.0000		UG/L
	FREON-113	S3D	85.04.23	10.0000		UG/L
	HYDRAZINE	CAL	85.04.23	1.0000	L	MG/L
	PERCHLOROETHYLENE	CDHS	80.04.16	3.0000		UG/L
		CDHS	80.07.28	2.6000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
08000060	PERCHLOROETHYLENE	CDHS	81.03.18	53.0000		UG/L
		CDHS	82.07.21	455.0000		UG/L
		S3D	85.04.23	500.0000		UG/L
	PERCHLORATE	CAL	85.04.23	0.0000	G	MG/L
	SELENIUM	CAL	85.04.23	5.0000	L	UG/L
	TRANS-1,2-DICHLOROETHYLENE	S3D	85.04.23	110.0000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.03	140.0000		UG/L
		CDHS	80.01.05	190.0000		UG/L
		CDHS	80.01.14	179.0000		UG/L
		CDHS	80.01.23	140.0000		UG/L
		CDHS	80.04.16	17.0000		UG/L
		CDHS	80.07.28	14.3000		UG/L
		CDHS	80.08.18	18.0000		UG/L
		CDHS	81.03.18	177.0000		UG/L
		CDHS	82.04.22	480.0000		UG/L
		CDHS	82.07.21	940.0000		UG/L
		CDHS	82.11.01	72.0000		UG/L
		CDHS	82.11.02	505.0000		UG/L
		CDHS	83.06.06	4.4000		UG/L
		S3D	85.04.23	1100.0000		UG/L
	THIOUREA	PED	85.04.23	10.0000	L	UG/L
	XYLIDINE	S3D	85.04.23	25.0000	L	UG/L
08000062	EPA METHOD 624--NO COMPOUND	CDHS	85.04.11	0.0000		
08000066	CARBON TETRACHLORIDE	CDHS	80.09.05	0.3800		UG/L
		CDHS	81.09.15	0.2600		UG/L
		CDHS	82.08.25	0.2300		UG/L
	PERCHLOROETHYLENE	CDHS	80.09.05	0.1500		UG/L
		CDHS	81.09.15	0.1800		UG/L
		CDHS	82.08.25	0.2800		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	2.6000		UG/L
		CDHS	80.01.14	1.7000		UG/L
		CDHS	80.09.05	1.0000		UG/L
		CDHS	81.09.15	0.8200		UG/L
		CDHS	82.08.25	2.4000		UG/L
08000067	EPA METHOD 624--NO COMPOUND	S3D	85.05.02	0.0000		
	EPA METHOD 625--COMPOUNDS D	S3D	85.05.02	0.0000		

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
08000067	DI-N-BUTYLPHTHALATE	S3D	85.05.02	10.0000	F	UG/L
	METHYLENE CHLORIDE	S3D	85.05.02	4.5000	F	UG/L
	PHENOLS	S3D	85.05.02	10.0000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	0.0300		UG/L
08000069	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.12	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.12	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.12	0.0000		
08000070	EPA METHOD 624--COMPOUNDS D	S3D	85.04.16	0.0000		
	EPA METHOD 625--COMPOUNDS D	S3D	85.04.16	0.0000		
	DI-N-BUTYLPHTHALATE	S3D	85.04.16	10.0000		UG/L
	FREON-113	S3D	85.04.16	1.0000	L	UG/L
	HYDRAZINE	CAL	85.04.16	1.0000	L	MG/L
	PERCHLORATE	CAL	85.04.16	0.0000	G	MG/L
	SELENIUM	CAL	85.04.16	5.0000	L	UG/L
	TRICHLOROETHYLENE	S3D	85.04.16	3.5000		UG/L
	THIOUREA	PED	85.04.16	10.0000	L	UG/L
	XYLIDINE	S3D	85.04.16	50.0000	L	UG/L
08000071	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.22	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.22	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.22	0.0000		
	TRICHLOROETHYLENE	CDHS	80.01.11	0.1700		UG/L
08000072	PERCHLOROETHYLENE	CDHS	80.12.11	0.1800		UG/L
	TRICHLOROETHYLENE	CDHS	80.12.11	0.9000		UG/L
08000073	TRICHLOROETHYLENE	CDHS	80.01.14	0.0300		UG/L
08000076	EPA METHOD 624--COMPOUNDS D	S3D	85.04.16	0.0000		
	EPA METHOD 625--COMPOUNDS D	S3D	85.04.16	0.0000		

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
08000076	DI-N-BUTYLPHTHALATE	S3D	85.04.16	10.0000	UG/L
	FREON-113	S3D	85.04.16	1.0000 L	UG/L
	HYDRAZINE	CAL	85.04.16	1.0000 L	MG/L
	PERCHLORATE	CAL	85.04.16	0.0000 G	MG/L
	SELENIUM	CBRDG	85.04.16	5.0000 L	UG/L
	TRICHLOROETHYLENE	S3D	85.04.16	1.0000	UG/L
	THIOUREA	PED	85.04.16	10.0000 L	UG/L
	XYLIDINE	S3D	85.04.16	50.0000 L	UG/L
08000077	EPA METHOD 624--NO COMPOUND	S3D	85.05.07	0.0000	
	EPA METHOD 625--NO COMPOUND	S3D	85.05.07	0.0000	
08000078	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.05	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.05	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.05	0.0000	
08000087	EPA METHOD 624--NO COMPOUND	JMM LAB	85.03.12	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.12	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.03.12	0.0000	
11900038	1,1,1-TRICHLOROETHANE	S3D	85.04.16	20.0000	UG/L
	1,1-DICHLOROETHYLENE	S3D	85.04.16	6.8000	UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.04.16	0.0000	
	EPA METHOD 625--COMPOUNDS D	S3D	85.04.16	0.0000	
	CARBON TETRACHLORIDE	S3D	85.04.16	5.0000	UG/L
	CHLOROFORM	S3D	85.04.16	5.0000	UG/L
	DI-N-BUTYLPHTHALATE	S3D	85.04.16	10.0000	UG/L
	FREON-113	S3D	85.04.16	5.0000 L	UG/L
	HYDRAZINE	CAL	85.04.16	1.0000 L	MG/L
	PERCHLOROETHYLENE	S3D	85.04.16	480.0000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
11900038	PERCHLORATE	CAL	85.04.16	0.0000	G	MG/L
	SELENIUM	CAL	85.04.16	5.0000	L	UG/L
	TRANS-1,2-DICHLOROETHYLENE	S3D	85.04.16	5.0000		UG/L
	TRICHLOROETHYLENE	S3D	85.04.16	600.0000		UG/L
	THIOUREA	PED	85.04.16	10.0000	L	UG/L
	XYLIDINE	S3D	85.04.16	50.0000	L	UG/L
11900497	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.07	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.07	0.0000		
11900729	PERCHLOROETHYLENE	CDHS	81.01.12	27.0000		UG/L
		CDHS	81.02.02	31.2000		UG/L
		CDHS	81.02.12	28.9000		UG/L
		CDHS	81.03.03	44.0000		UG/L
		CDHS	81.03.24	39.0000		UG/L
		CDHS	81.04.29	46.0000		UG/L
		CDHS	81.05.05	37.5000		UG/L
		CDHS	82.01.11	20.0000		UG/L
		CDHS	82.01.20	28.0000		UG/L
		CDHS	82.07.12	19.3000		UG/L
		CDHS	82.07.13	23.0000		UG/L
		CDHS	82.07.14	18.5000		UG/L
		CDHS	83.11.21	3.6000		UG/L
		CDHS	83.12.05	5.5000		UG/L
		CDHS	83.12.19	6.6000		UG/L
		CDHS	84.01.16	4.5000		UG/L
		CDHS	84.02.06	5.3000		UG/L
		CDHS	84.06.18	4.0000		UG/L
		CDHS	84.08.27	6.0000		UG/L
		CDHS	84.09.10	7.3000		UG/L
		CDHS	84.10.15	9.7000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.31	0.7500		UG/L
		CDHS	80.02.04	1.8000		UG/L
21900749	TRICHLOROETHYLENE	CDHS	84.10.02	4.6000		UG/L
		CDHS	84.11.05	2.9000		UG/L
		CDHS	84.12.03	4.8000		UG/L
		CDHS	85.01.07	5.2000		UG/L
		CDHS	85.03.04	5.9000		UG/L
21900880	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.14	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.14	0.0000		

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
21900880	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.14	0.0000	
	PERCHLOROETHYLENE	JMM LAB	85.02.14	0.4000	UG/L
21902857	TRICHLOROETHYLENE	CDHS	84.10.02	4.6000	UG/L
		CDHS	84.11.05	4.4000	UG/L
		CDHS	84.12.03	2.3000	UG/L
		CDHS	85.01.07	3.9000	UG/L
		CDHS	85.02.04	2.5000	UG/L
		CDHS	85.03.04	2.7000	UG/L
28000065	TRICHLOROETHYLENE	CDHS	84.10.02	5.8000	UG/L
		CDHS	84.11.05	2.9000	UG/L
		CDHS	84.12.03	4.1000	UG/L
		CDHS	85.01.07	4.9000	UG/L
		CDHS	85.02.04	4.8000	UG/L
		CDHS	85.03.04	4.8000	UG/L
31900736	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.22	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.22	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.22	0.0000	
	CARBON TETRACHLORIDE	CDHS	81.07.15	0.2400	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	0.1400	UG/L
31900746	TRICHLOROETHYLENE	CDHS	80.01.10	0.0700	UG/L
31900747	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.22	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.22	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.22	0.0000	
	TRICHLOROETHYLENE	CDHS	80.01.10	0.0200	UG/L
31902819	1,1,1-TRICHLOROETHANE	S3D	85.03.19	6.0000	UG/L
	1,1-DICHLOROETHYLENE	S3D	85.03.19	8.0000	UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.03.19	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.19	0.0000	
	EPA METHOD 625--COMPOUNDS D	ERG	85.03.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.03.19	0.0000	
	BIS(2-ETHYLHEXYL)PHTHALATE	ERG	85.03.19	18.0000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
31902819	CARBON TETRACHLORIDE	CDHS	80.10.14	0.1000	L	UG/L
		CDHS	81.07.13	0.1000	L	UG/L
		CDHS	81.09.03	0.1000	L	UG/L
		CDHS	82.02.02	19.0000		UG/L
		CDHS	82.04.21	0.1000	L	UG/L
		CDHS	82.07.21	4.9000		UG/L
	FREON-113	S3D	85.03.19	5.0000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.03.21	59.0000		UG/L
		CDHS	80.04.11	123.0000		UG/L
		CDHS	80.06.06	122.0000		UG/L
		CDHS	80.10.14	0.2400		UG/L
		CDHS	80.11.13	0.6000		UG/L
		CDHS	80.11.18	190.0000		UG/L
		CDHS	81.06.23	0.5000		UG/L
		CDHS	81.07.13	150.0000		UG/L
		CDHS	81.07.14	139.0000		UG/L
		CDHS	81.09.03	140.0000		UG/L
		CDHS	82.02.02	142.0000		UG/L
		CDHS	82.04.21	115.0000		UG/L
		CDHS	82.07.16	111.0000		UG/L
		CDHS	82.07.21	117.0000		UG/L
		S3D	85.03.19	42.0000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	28.0000		UG/L
		CDHS	80.01.22	25.0000		UG/L
		CDHS	80.03.20	13.4000		UG/L
		CDHS	80.03.21	21.2000		UG/L
		CDHS	80.04.11	25.0000		UG/L
		CDHS	80.06.06	23.4000		UG/L
		CDHS	80.10.14	3.4000		UG/L
		CDHS	80.11.13	4.8000		UG/L
		CDHS	80.11.18	13.0000		UG/L
		CDHS	81.06.23	7.0000		UG/L
		CDHS	81.07.13	50.0000		UG/L
		CDHS	81.07.14	40.0000		UG/L
		CDHS	81.09.03	45.0000		UG/L
		CDHS	82.02.02	46.0000		UG/L
		CDHS	82.04.21	35.0000		UG/L
		CDHS	82.07.16	29.0000		UG/L
		CDHS	82.07.21	33.3000		UG/L
		S3D	85.03.19	12.0000		UG/L
	XYLIDINE	ERG	85.03.19	25.0000	L	UG/L
31902820	1,1,1-TRICHLOROETHANE	S3D	85.03.19	7.0000		UG/L
	1,1-DICHLOROETHYLENE	S3D	85.03.19	10.0000		UG/L
	EPA METHOD 624--COMPOUNDS D	S3D	85.03.19	0.0000		

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
31902820	EPA METHOD 625--NO COMPOUND	JMM LAB	85.03.19	0.0000		
	EPA METHOD 625--COMPOUNDS D	ERG	85.03.19	0.0000		
	AGRICULTURAL CHEMICALS--NON	CBRDG	85.03.19	0.0000		
	BIS(2-ETHYLHEXYL)PHTHALATE	ERG	85.03.19	18.0000		UG/L
	FREON-113	S3D	85.03.19	5.0000	L	UG/L
	PERCHLOROETHYLENE	CDHS	80.04.11	105.0000		UG/L
		S3D	85.03.19	46.0000		UG/L
	TRANS-1,2-DICHLOROETHYLENE	JMM LAB	85.03.19	16.0000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	8.8000		UG/L
		CDHS	80.01.11	18.0000		UG/L
		CDHS	80.01.15	8.8000		UG/L
		CDHS	80.01.22	25.0000		UG/L
		CDHS	80.02.06	7.1000		UG/L
		CDHS	80.04.11	22.0000		UG/L
		S3D	85.03.19	14.0000		UG/L
	XYLIDINE	ERG	85.03.19	25.0000	L	UG/L
41900739	PERCHLOROETHYLENE	CDHS	81.07.15	0.1300		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	0.0800		UG/L
41900745	EPA METHOD 624--NO COMPOUND	JMM LAB	85.02.19	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.19	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.19	0.0000		
41901605	EPA METHOD 624--NO COMPOUND	S3D	85.05.07	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.05.07	0.0000		
	CARBON TETRACHLORIDE	CDHS	81.03.27	0.1000	L	UG/L
		CDHS	82.07.20	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	81.03.27	0.1000	L	UG/L
		CDHS	82.07.20	0.1000	L	UG/L
		CDHS	84.11.08	0.1000	L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.0100	L	UG/L
		CDHS	80.12.17	0.2300		UG/L
		CDHS	81.03.27	0.1000		UG/L
		CDHS	82.07.16	0.1000	L	UG/L
		CDHS	82.07.20	0.1000	L	UG/L
		CDHS	83.06.15	0.5000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
41901605	TRICHLOROETHYLENE	CDHS	84.11.08	0.1000	L	UG/L
41901607	CARBON TETRACHLORIDE	CDHS	82.07.20	0.5000	L	UG/L
	PERCHLOROETHYLENE	CDHS	82.07.20	0.5000	L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.22	0.0100	L	UG/L
		CDHS	80.06.06	2.5000		UG/L
		CDHS	82.07.20	0.5000	L	UG/L
51902858	1,1-DICHLOROETHYLENE	CDHS	85.03.29	0.1000	L	UG/L
	1,2-DICHLOROETHANE	CDHS	85.03.29	0.5000	L	UG/L
	CARBON TETRACHLORIDE	CDHS	80.09.04	4.0000		UG/L
		CDHS	80.09.22	2.5000		UG/L
		CDHS	81.01.12	6.9000		UG/L
		CDHS	81.03.26	8.4000		UG/L
		CDHS	81.04.13	8.3000		UG/L
		CDHS	81.05.05	7.1000		UG/L
		CDHS	81.06.02	8.3000		UG/L
		CDHS	81.07.15	6.4000		UG/L
		CDHS	81.07.20	7.7000		UG/L
		CDHS	81.08.10	6.8000		UG/L
		CDHS	81.09.14	5.5000		UG/L
		CDHS	81.10.19	6.6000		UG/L
		CDHS	81.11.09	6.7000		UG/L
		CDHS	81.11.19	1.5000		UG/L
		CDHS	81.11.23	1.2000		UG/L
		CDHS	81.11.30	1.5000		UG/L
		CDHS	81.12.14	1.7000		UG/L
		CDHS	82.01.11	5.4000		UG/L
		CDHS	82.01.12	17.1000		UG/L
		CDHS	82.06.08	5.6000		UG/L
		CDHS	82.06.15	4.8000		UG/L
		CDHS	82.07.13	8.4000		UG/L
		CDHS	82.07.19	6.3000		UG/L
		CDHS	82.08.17	7.5000		UG/L
		CDHS	82.09.20	5.1000		UG/L
		CDHS	82.10.18	5.7000		UG/L
		CDHS	82.11.15	4.7000		UG/L
		CDHS	82.11.20	5.3000		UG/L
		CDHS	83.01.17	6.3000	L	UG/L
		CDHS	83.02.22	6.5000		UG/L
		CDHS	83.03.21	4.9000		UG/L
		CDHS	83.04.18	4.9000		UG/L
		CDHS	83.05.16	4.8000		UG/L
		CDHS	83.06.21	4.2000		UG/L
		CDHS	83.07.18	4.8000		UG/L
		CDHS	83.08.15	4.5000		UG/L
		CDHS	83.09.19	5.4000		UG/L
		CDHS	83.10.17	4.8000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
51902858	CARBON TETRACHLORIDE	CDHS	83.11.21	5.3000	UG/L
		CDHS	83.12.19	5.3000	UG/L
		CDHS	84.01.16	6.1000	UG/L
		CDHS	84.02.21	5.4000	UG/L
		CDHS	84.03.19	5.6000	UG/L
		CDHS	84.04.09	6.4000	UG/L
		CDHS	84.05.21	7.1000	UG/L
		CDHS	84.06.18	5.3000	UG/L
		CDHS	84.08.20	8.5000	UG/L
		CDHS	84.09.17	4.5000	UG/L
		CDHS	84.10.15	5.4000	UG/L
		CDHS	84.11.09	4.5000	UG/L
		CDHS	84.12.17	6.7000	UG/L
		CDHS	85.01.22	7.1000	UG/L
		CDHS	85.02.19	4.2000	UG/L
		CDHS	85.03.15	6.7000	UG/L
		CDHS	85.03.18	4.7000	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.26	0.2400	UG/L
		CDHS	80.03.10	0.2200	UG/L
		CDHS	80.08.01	0.1400	UG/L
		CDHS	80.09.04	0.2400	UG/L
		CDHS	81.01.12	0.3100	UG/L
		CDHS	81.03.26	0.2200	UG/L
		CDHS	81.07.15	0.2200	UG/L
		CDHS	81.11.19	0.3000	UG/L
		CDHS	82.01.12	6.0000	UG/L
		CDHS	82.06.15	0.7000	UG/L
		CDHS	82.07.13	0.3400	UG/L
		CDHS	85.03.15	0.5000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	1.0000	UG/L
		CDHS	80.01.11	1.2000	UG/L
		CDHS	80.02.26	0.9700	UG/L
		CDHS	80.03.10	1.0000	UG/L
		CDHS	80.08.01	0.8000	UG/L
		CDHS	80.09.04	0.4300	UG/L
		CDHS	81.01.12	0.8200	UG/L
		CDHS	81.07.15	0.9400	UG/L
		CDHS	81.11.19	0.2000	UG/L
		CDHS	82.01.12	12.5000	UG/L
		CDHS	82.06.15	15.0000	UG/L
		CDHS	82.07.13	1.1000	UG/L
		CDHS	83.07.18	4.8000	UG/L
		CDHS	85.03.15	0.8000	UG/L
51902947	1,1-DICHLOROETHYLENE	CDHS	85.03.29	0.1000 L	UG/L
	1,2-DICHLOROETHANE	CDHS	85.03.29	0.5000 L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.19	0.0000	

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
51902947	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.19	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.09.04	11.0000	UG/L
		CDHS	80.09.22	11.0000	UG/L
		CDHS	80.09.30	4.6000	UG/L
		CDHS	80.10.06	9.3000	UG/L
		CDHS	80.10.13	6.0000	UG/L
		CDHS	80.10.20	20.0000	UG/L
		CDHS	80.10.27	18.0000	UG/L
		CDHS	80.11.03	17.8000	UG/L
		CDHS	80.11.10	13.8000	UG/L
		CDHS	81.01.12	8.8000	UG/L
		CDHS	81.03.20	8.0000	UG/L
		CDHS	81.03.26	11.0000	UG/L
		CDHS	81.04.13	8.6000	UG/L
		CDHS	81.05.05	11.8000	UG/L
		CDHS	81.06.17	9.4000	UG/L
		CDHS	81.07.20	9.0000	UG/L
		CDHS	81.08.10	11.1000	UG/L
		CDHS	81.09.14	4.5000	UG/L
		CDHS	81.10.19	5.8000	UG/L
		CDHS	81.11.09	6.1000	UG/L
		CDHS	81.12.14	5.5000	UG/L
		CDHS	82.01.11	5.4000	UG/L
		CDHS	82.01.26	4.8000	UG/L
		CDHS	82.02.08	5.0000	UG/L
		CDHS	82.03.08	3.4000	UG/L
		CDHS	82.04.12	4.1000	UG/L
		CDHS	82.05.10	5.8000	UG/L
		CDHS	82.06.08	6.1000	UG/L
		CDHS	82.06.15	4.0000	UG/L
		CDHS	82.07.13	8.7000	UG/L
		CDHS	82.07.19	5.8000	UG/L
		CDHS	82.08.17	6.7000	UG/L
		CDHS	82.09.20	6.0000	UG/L
		CDHS	82.10.18	5.5000	UG/L
		CDHS	82.11.15	5.6000	UG/L
		CDHS	82.11.20	3.9000	UG/L
		CDHS	83.01.17	5.7000	UG/L
		CDHS	83.02.22	5.2000	UG/L
		CDHS	83.03.21	5.4000	UG/L
		CDHS	83.04.18	5.2000	UG/L
		CDHS	83.05.16	5.8000	UG/L
		CDHS	83.06.21	5.2000	UG/L
		CDHS	83.07.18	5.3000	UG/L
		CDHS	83.08.15	5.8000	UG/L
		CDHS	83.09.19	5.9000	UG/L
		CDHS	83.10.17	5.3000	UG/L
		CDHS	83.11.21	5.8000	UG/L
		CDHS	83.12.19	5.0000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
51902947	CARBON TETRACHLORIDE	CDHS	84.01.16	5.8000	UG/L
		CDHS	84.02.21	5.4000	UG/L
		CDHS	84.03.19	5.7000	UG/L
		CDHS	84.04.16	5.7000	UG/L
		CDHS	84.05.21	6.2000	UG/L
		CDHS	84.06.18	5.4000	UG/L
		CDHS	84.08.20	8.1000	UG/L
		CDHS	84.09.17	4.0000	UG/L
		CDHS	84.10.15	3.9000	UG/L
		CDHS	84.11.09	3.9000	UG/L
		CDHS	84.12.17	5.2000	UG/L
		CDHS	85.01.22	4.7000	UG/L
		CDHS	85.02.19	3.5000	UG/L
		CDHS	85.03.15	5.5000	UG/L
		CDHS	85.03.18	4.8000	UG/L
	PERCHLOROETHYLENE	CDHS	80.03.10	0.3000	UG/L
		CDHS	80.08.01	0.1900	UG/L
		CDHS	80.09.04	0.2400	UG/L
		CDHS	81.01.12	0.5500	UG/L
		CDHS	81.03.20	0.4000	UG/L
		CDHS	81.03.26	0.4200	UG/L
		CDHS	82.01.26	0.5300	UG/L
		CDHS	82.06.15	4.0000	UG/L
		CDHS	82.07.13	1.2000	UG/L
		JMM LAB	85.02.19	3.8000	UG/L
		CDHS	85.03.15	1.6000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	0.1100	UG/L
		CDHS	80.03.10	1.9000	UG/L
		CDHS	80.08.01	1.6000	UG/L
		CDHS	80.09.04	1.2000	UG/L
		CDHS	81.01.12	1.4000	UG/L
		CDHS	81.03.20	1.2000	UG/L
		CDHS	82.01.26	0.9600	UG/L
		CDHS	82.06.15	7.4000	UG/L
		CDHS	82.07.13	1.2000	UG/L
		JMM LAB	85.02.19	1.8000	UG/L
		CDHS	85.03.15	0.7000	UG/L
61900718	1,1-DICHLOROETHYLENE	CDHS	85.03.15	2.5000 L	UG/L
		CDHS	85.03.22	2.3000 L	UG/L
		CDHS	85.05.14	2.4000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.26	0.8500	UG/L
		CDHS	80.03.10	0.5200	UG/L
		CDHS	80.08.01	0.1500	UG/L
		CDHS	81.01.12	0.2300	UG/L
		CDHS	81.07.05	0.4200	UG/L
		CDHS	85.03.15	0.3000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	2.1000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
61900718	TRICHLOROETHYLENE	CDHS	80.01.11	2.2000	UG/L
		CDHS	80.02.26	1.8000	UG/L
		CDHS	80.03.10	1.4000	UG/L
		CDHS	80.08.01	0.3700	UG/L
		CDHS	81.01.12	0.4800	UG/L
		CDHS	81.07.05	0.9100	UG/L
		CDHS	85.03.15	0.9300	UG/L
61900719	1,1,1-TRICHLOROETHANE	JMM LAB	85.02.19	2.5000	UG/L
	1,1-DICHLOROETHYLENE	CDHS	85.03.22	0.1500 L	UG/L
		CDHS	85.03.29	0.1000 L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.19	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.19	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.09.04	0.4700	UG/L
		CDHS	81.07.15	0.7700	UG/L
		JMM LAB	85.02.19	2.3000	UG/L
	CHLOROFORM	CDHS	85.03.22	0.5000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.09.04	0.1600	UG/L
		CDHS	81.07.15	0.1900	UG/L
	STYRENE	CDHS	85.03.22	1.5000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	0.1600	UG/L
		CDHS	80.01.11	0.2000	UG/L
		CDHS	80.01.15	1.1000	UG/L
		CDHS	80.09.04	0.1600	UG/L
		CDHS	81.07.15	0.3400	UG/L
		JMM LAB	85.02.19	0.6000	UG/L
71900721	1,1-DICHLOROETHANE	JMM LAB	85.02.19	4.4000	UG/L
	1,1-DICHLOROETHYLENE	JMM LAB	85.02.19	1.0000	UG/L
		JMM LAB	85.04.25	1.1000	UG/L
	1,2-DICHLOROETHANE	JMM LAB	85.04.25	0.2000	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.19	0.0000	
		JMM LAB	85.04.25	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.19	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.08.21	5.9000 L	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
71900721	CARBON TETRACHLORIDE	CDHS	80.09.04	5.4000	UG/L
		CDHS	80.09.22	4.8000	UG/L
		CDHS	80.09.30	0.7000	UG/L
		CDHS	80.10.06	4.4000	UG/L
		CDHS	80.10.13	2.8000	UG/L
		CDHS	80.10.20	11.7000	UG/L
		CDHS	80.11.03	8.4000	UG/L
		CDHS	80.11.10	7.5000	UG/L
		CDHS	81.01.12	5.7000	UG/L
		CDHS	81.03.26	6.1000	UG/L
		CDHS	81.04.13	5.5000	UG/L
		CDHS	81.05.04	6.5000	UG/L
		CDHS	81.06.17	6.4000	UG/L
		CDHS	81.07.06	3.9000	UG/L
		CDHS	81.07.13	4.2000	UG/L
		CDHS	81.07.15	4.2000	UG/L
		CDHS	81.08.24	5.3000	UG/L
		CDHS	81.09.28	5.0000	UG/L
		CDHS	81.10.26	3.4000	UG/L
		CDHS	81.11.23	4.4000	UG/L
		CDHS	81.11.30	6.7000	UG/L
		CDHS	81.12.21	5.3000	UG/L
		CDHS	82.01.26	4.5000	UG/L
		CDHS	82.02.16	9.4000	UG/L
		CDHS	82.03.15	4.8000	UG/L
		CDHS	82.04.19	6.0000	UG/L
		CDHS	82.05.17	6.0000	UG/L
		CDHS	82.07.13	6.1000	UG/L
		CDHS	82.07.26	7.4000	UG/L
		CDHS	82.08.09	6.9000	UG/L
		CDHS	82.09.13	6.0000	UG/L
		CDHS	82.10.11	6.6000	UG/L
		CDHS	82.11.08	4.5000	UG/L
		CDHS	82.11.13	3.8000	UG/L
		CDHS	83.01.10	5.2000	UG/L
		CDHS	83.02.15	4.7000	UG/L
		CDHS	83.03.14	6.0000	UG/L
		CDHS	83.04.11	5.2000	UG/L
		CDHS	83.05.09	6.0000	UG/L
		CDHS	83.06.13	6.0000	UG/L
		CDHS	83.08.22	5.7000	UG/L
		CDHS	83.09.12	5.0000	UG/L
		CDHS	83.10.10	6.9000	UG/L
		CDHS	83.11.14	7.0000	UG/L
		CDHS	84.02.13	5.3000	UG/L
		CDHS	84.03.12	6.3000	UG/L
		CDHS	84.04.09	9.2000	UG/L
		CDHS	84.05.14	6.5000	UG/L
		CDHS	84.06.11	6.7000	UG/L
		CDHS	84.09.10	6.1000	UG/L
		CDHS	84.12.10	5.9000	UG/L
		JMM LAB	85.02.19	17.0000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
71900721	CARBON TETRACHLORIDE	CDHS	85.03.18	4.8000	UG/L
		JMM LAB	85.04.25	14.0000	UG/L
	CHLOROFORM	JMM LAB	85.02.19	5.2000	UG/L
		JMM LAB	85.04.25	3.1000	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.26	0.8900	UG/L
		CDHS	80.04.08	0.2200	UG/L
		CDHS	80.04.10	0.4200	UG/L
		CDHS	80.04.14	0.6900	UG/L
		CDHS	80.04.17	1.1000	UG/L
		CDHS	80.09.04	0.3500	UG/L
		CDHS	81.01.12	0.4800	UG/L
		CDHS	81.03.26	0.4200	UG/L
		CDHS	81.04.13	0.3500	UG/L
		CDHS	81.05.04	0.5000	UG/L
		CDHS	81.06.17	0.9000	UG/L
		CDHS	81.07.06	2.0000	UG/L
		CDHS	81.07.13	1.2000	UG/L
		CDHS	81.07.15	1.2000	UG/L
		CDHS	81.08.24	1.5000	UG/L
		CDHS	81.09.28	1.5000	UG/L
		CDHS	81.10.26	6.4000	UG/L
		CDHS	81.11.23	5.2000	UG/L
		CDHS	81.11.30	3.1000	UG/L
		CDHS	81.12.21	1.6000	UG/L
		CDHS	82.01.26	1.2000	UG/L
		CDHS	82.02.16	1.5000	UG/L
		CDHS	82.03.15	0.8000	UG/L
		CDHS	82.04.19	0.7000	UG/L
		CDHS	82.05.17	0.8000	UG/L
		CDHS	82.07.13	0.7800	UG/L
		CDHS	82.08.09	1.2000	UG/L
		CDHS	82.10.11	0.8000	UG/L
		CDHS	82.11.08	1.0000	UG/L
		CDHS	83.02.15	0.4000	UG/L
		CDHS	83.05.09	0.3000	UG/L
		CDHS	84.09.10	0.8000	UG/L
		CDHS	84.12.10	2.0000	UG/L
		CDHS	85.03.11	1.0000	UG/L
		JMM LAB	85.04.25	1.2000	UG/L
	TRANS-1,2-DICHLOROETHYLENE	JMM LAB	85.02.19	4.4000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	8.1000	UG/L
		CDHS	80.01.10	7.1000	UG/L
		CDHS	80.01.14	6.9000	UG/L
		CDHS	80.01.23	6.9000	UG/L
		CDHS	80.01.29	3.9000	UG/L
		CDHS	80.02.04	7.1000	UG/L
		CDHS	80.02.26	9.0000	UG/L
		CDHS	80.04.08	6.9000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
71900721	TRICHLOROETHYLENE	CDHS	80.04.10	8.4000	UG/L
		CDHS	80.04.14	6.0000	UG/L
		CDHS	80.04.17	7.2000	UG/L
		CDHS	80.06.16	2.9000	UG/L
		CDHS	80.06.23	4.1000	UG/L
		CDHS	80.07.01	4.1000	UG/L
		CDHS	80.08.11	1.7000	UG/L
		CDHS	80.09.04	3.5000	UG/L
		CDHS	80.09.08	5.9000	UG/L
		CDHS	80.10.06	5.0000	UG/L
		CDHS	80.11.03	5.0000	UG/L
		CDHS	80.12.01	6.2000	UG/L
		CDHS	81.01.05	5.9000	UG/L
		CDHS	81.01.12	5.2000	UG/L
		CDHS	81.02.02	7.3000	UG/L
		CDHS	81.03.26	7.1000	UG/L
		CDHS	81.04.13	4.9000	UG/L
		CDHS	81.05.04	8.4000	UG/L
		CDHS	81.06.17	7.8000	UG/L
		CDHS	81.07.06	9.7000	UG/L
		CDHS	81.07.13	7.0000	UG/L
		CDHS	81.07.15	7.0000	UG/L
		CDHS	81.08.24	12.3000	UG/L
		CDHS	81.09.28	11.8000	UG/L
		CDHS	81.10.26	1.6000	UG/L
		CDHS	81.11.23	6.6000	UG/L
		CDHS	81.11.30	17.0000	UG/L
		CDHS	81.12.21	13.0000	UG/L
		CDHS	82.01.26	13.7000	UG/L
		CDHS	82.02.16	20.5000	UG/L
		CDHS	82.03.15	13.5000	UG/L
		CDHS	82.04.19	13.0000	UG/L
		CDHS	82.05.17	16.5000	UG/L
		CDHS	82.07.13	21.0000	UG/L
		CDHS	82.07.26	24.4000	UG/L
		CDHS	82.08.09	20.7000	UG/L
		CDHS	82.09.13	14.6000	UG/L
		CDHS	82.10.11	14.5000	UG/L
		CDHS	82.11.08	21.8000	UG/L
		CDHS	82.11.13	15.3000	UG/L
		CDHS	83.01.10	14.0000	UG/L
		CDHS	83.02.15	16.8000	UG/L
		CDHS	83.03.14	18.8000	UG/L
		CDHS	83.04.11	12.7000	UG/L
		CDHS	83.05.09	10.1000	UG/L
		CDHS	83.06.13	7.4000	UG/L
		CDHS	83.07.11	6.2000	UG/L
		CDHS	83.08.22	5.7000	UG/L
		CDHS	83.09.12	5.4000	UG/L
		CDHS	83.10.10	7.6000	UG/L
		CDHS	83.11.14	8.3000	UG/L
		CDHS	83.12.13	6.5000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
71900721	TRICHLOROETHYLENE	CDHS	84.01.09	6.4000	UG/L
		CDHS	84.02.13	9.6000	UG/L
		CDHS	84.03.12	8.0000	UG/L
		CDHS	84.04.09	9.4000	UG/L
		CDHS	84.05.14	8.5000	UG/L
		CDHS	84.06.11	9.7000	UG/L
		CDHS	84.08.14	8.8000	UG/L
		CDHS	84.09.10	12.5000	UG/L
		CDHS	84.10.08	16.7000	UG/L
		CDHS	84.11.13	16.5000	UG/L
		CDHS	84.12.10	12.4000	UG/L
		CDHS	85.01.14	18.4000	UG/L
		CDHS	85.02.11	22.0000	UG/L
		CDHS	85.03.18	24.3000	UG/L
		JMM LAB	85.04.25	39.0000	UG/L
71903093	1,1-DICHLOROETHYLENE	CDHS	85.03.15	0.3500 L	UG/L
		CDHS	85.03.29	0.3300 L	UG/L
		JMM LAB	85.04.25	0.5000	UG/L
		CDHS	85.05.14	0.3000 L	UG/L
	1,2-DICHLOROETHANE	JMM LAB	85.02.19	3.4000	UG/L
		CDHS	85.03.15	3.6000	UG/L
		CDHS	85.03.29	3.1000	UG/L
		CDHS	85.05.14	3.3000	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.19	0.0000	
		JMM LAB	85.04.25	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.19	0.0000	
	CIS-1,2-DICHLOROETHYLENE	CDHS	85.03.29	1.3000 L	UG/L
	CARBON TETRACHLORIDE	CDHS	80.03.30	4.2000	UG/L
		CDHS	80.08.21	5.3000	UG/L
		CDHS	80.09.04	4.0000	UG/L
		CDHS	80.09.22	4.2000	UG/L
		CDHS	80.10.27	10.0000	UG/L
		CDHS	81.03.20	4.2000	UG/L
		CDHS	81.03.26	4.9000	UG/L
		CDHS	81.04.13	4.0000	UG/L
		CDHS	81.05.04	5.7000	UG/L
		CDHS	81.06.02	5.2000	UG/L
		CDHS	81.07.06	3.3000	UG/L
		CDHS	81.08.24	4.2000	UG/L
		CDHS	81.09.28	3.7000	UG/L
		CDHS	81.10.26	7.4000	UG/L
		CDHS	81.11.23	4.5000	UG/L
		CDHS	81.11.30	4.8000	UG/L
		CDHS	81.12.21	4.0000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
71903093	CARBON TETRACHLORIDE	CDHS	82.01.26	3.2000		UG/L
		CDHS	82.02.26	5.5000		UG/L
		CDHS	82.03.15	2.8000		UG/L
		CDHS	82.04.19	5.4000		UG/L
		CDHS	82.05.17	4.6000		UG/L
		CDHS	82.06.14	4.0000		UG/L
		CDHS	82.07.26	5.0000		UG/L
		CDHS	82.08.09	1.7000		UG/L
		CDHS	82.09.13	4.1000		UG/L
		CDHS	82.10.11	5.0000		UG/L
		CDHS	82.11.08	2.5000		UG/L
		CDHS	82.11.13	3.0000		UG/L
		CDHS	83.01.10	3.5000		UG/L
		CDHS	83.02.15	4.1000		UG/L
		CDHS	83.03.14	4.6000		UG/L
		CDHS	83.04.11	4.7000		UG/L
		CDHS	83.05.09	4.3000		UG/L
		CDHS	83.06.13	4.8000		UG/L
		CDHS	83.08.08	7.2000		UG/L
		CDHS	83.09.12	4.4000		UG/L
		CDHS	83.10.10	6.2000		UG/L
		CDHS	83.11.14	5.3000		UG/L
		CDHS	84.02.13	4.3000		UG/L
		CDHS	84.03.12	5.1000		UG/L
		CDHS	84.04.09	8.0000		UG/L
		CDHS	84.05.14	5.3000		UG/L
		CDHS	84.06.11	5.1000		UG/L
		CDHS	84.09.10	4.5000		UG/L
		JMM LAB	85.02.19	13.0000		UG/L
		CDHS	85.03.15	6.6000		UG/L
		CDHS	85.03.18	5.2000		UG/L
		CDHS	85.03.29	7.7000		UG/L
		JMM LAB	85.04.25	7.2000		UG/L
	CHLOROFORM	JMM LAB	85.02.19	3.4000		UG/L
		CDHS	85.03.29	2.2000		UG/L
		JMM LAB	85.04.25	1.5000		UG/L
	PERCHLOROETHYLENE	CDHS	80.02.13	7.4000		UG/L
		CDHS	80.03.30	3.9000		UG/L
		CDHS	80.05.01	2.8000		UG/L
		CDHS	80.07.01	4.0000	L	UG/L
		CDHS	80.08.01	2.2000		UG/L
		CDHS	80.08.11	1.4000		UG/L
		CDHS	80.09.04	3.1000		UG/L
		CDHS	80.09.08	2.9000		UG/L
		CDHS	80.10.06	1.3000		UG/L
		CDHS	80.11.03	4.9000		UG/L
		CDHS	80.12.01	3.0000		UG/L
		CDHS	81.01.05	3.4000		UG/L
		CDHS	81.02.02	3.0000		UG/L
		CDHS	81.03.20	3.9000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
71903093	PERCHLOROETHYLENE	CDHS	81.03.26	3.5000	UG/L
		CDHS	81.04.13	3.4000	UG/L
		CDHS	81.05.04	3.3000	UG/L
		CDHS	81.06.02	3.9000	UG/L
		CDHS	81.07.06	4.4000	UG/L
		CDHS	81.08.24	6.8000	UG/L
		CDHS	81.09.28	5.1000	UG/L
		CDHS	81.10.26	5.0000	UG/L
		CDHS	81.11.23	0.9000	UG/L
		CDHS	81.11.30	12.0000	UG/L
		CDHS	81.12.21	7.3000	UG/L
		CDHS	82.01.26	5.7000	UG/L
		CDHS	82.02.26	6.2000	UG/L
		CDHS	82.03.15	3.0000	UG/L
		CDHS	82.04.19	4.7000	UG/L
		CDHS	82.05.17	4.8000	UG/L
		CDHS	82.06.14	4.0000	UG/L
		CDHS	82.07.26	5.8000	UG/L
		CDHS	82.08.09	1.6000	UG/L
		CDHS	82.09.13	5.6000	UG/L
		CDHS	82.10.11	3.5000	UG/L
		CDHS	82.11.08	3.5000	UG/L
		CDHS	82.11.13	2.4000	UG/L
		CDHS	83.01.10	2.5000	UG/L
		CDHS	83.02.15	2.5000	UG/L
		CDHS	83.03.14	2.3000	UG/L
		CDHS	83.04.11	1.9000	UG/L
		CDHS	83.05.09	2.2000	UG/L
		CDHS	83.06.13	1.3000	UG/L
		CDHS	83.08.08	1.8000	UG/L
		CDHS	83.10.10	1.6000	UG/L
		CDHS	83.11.14	1.3000	UG/L
		CDHS	84.02.13	1.3000	UG/L
		CDHS	84.03.12	1.4000	UG/L
		CDHS	84.04.09	2.1000	UG/L
		CDHS	84.05.14	2.0000	UG/L
		CDHS	84.06.11	1.9000	UG/L
		CDHS	84.09.10	2.4000	UG/L
		JMM LAB	85.02.19	6.4000	UG/L
		CDHS	85.03.15	0.8300	UG/L
		CDHS	85.03.18	2.9000	UG/L
		CDHS	85.03.29	0.7000	UG/L
		JMM LAB	85.04.25	2.5000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	5.2000	UG/L
		CDHS	80.01.10	5.5000	UG/L
		CDHS	80.01.14	6.0000	UG/L
		CDHS	80.01.15	2.5000	UG/L
		CDHS	80.01.22	5.2000	UG/L
		CDHS	80.01.29	3.5000	UG/L
		CDHS	80.02.04	6.4000	UG/L
		CDHS	80.02.13	5.5000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
71903093	TRICHLOROETHYLENE	CDHS	80.03.30	6.2000		UG/L
		CDHS	80.05.01	4.7000		UG/L
		CDHS	80.07.01	5.0000	L	UG/L
		CDHS	80.08.01	3.9000		UG/L
		CDHS	80.08.11	1.7000		UG/L
		CDHS	80.09.04	2.8000		UG/L
		CDHS	80.09.08	4.8000		UG/L
		CDHS	80.09.29	0.9000		UG/L
		CDHS	80.10.06	4.8000		UG/L
		CDHS	80.11.03	9.0000		UG/L
		CDHS	80.12.01	5.0000		UG/L
		CDHS	81.01.05	4.8000		UG/L
		CDHS	81.02.02	7.1000		UG/L
		CDHS	81.03.20	6.2000		UG/L
		CDHS	81.03.26	6.1000		UG/L
		CDHS	81.04.13	5.3000		UG/L
		CDHS	81.05.04	7.3000		UG/L
		CDHS	81.06.02	7.3000		UG/L
		CDHS	81.07.06	4.8000		UG/L
		CDHS	81.08.24	7.0000		UG/L
		CDHS	81.09.28	6.4000		UG/L
		CDHS	81.10.26	6.7000		UG/L
		CDHS	81.11.23	9.8000		UG/L
		CDHS	81.11.30	4.0000		UG/L
		CDHS	81.12.21	6.4000		UG/L
		CDHS	82.01.26	6.1000		UG/L
		CDHS	82.02.26	9.2000		UG/L
		CDHS	82.03.15	4.5000		UG/L
		CDHS	82.04.19	7.1000		UG/L
		CDHS	82.05.17	9.0000		UG/L
		CDHS	82.06.14	7.4000		UG/L
		CDHS	82.07.26	9.6000		UG/L
		CDHS	82.08.09	6.9000		UG/L
		CDHS	82.09.13	4.6000		UG/L
		CDHS	82.10.11	7.2000		UG/L
		CDHS	82.11.08	8.9000		UG/L
		CDHS	82.11.13	8.7000		UG/L
		CDHS	83.01.10	6.6000		UG/L
		CDHS	83.02.15	10.4000		UG/L
		CDHS	83.03.14	11.8000		UG/L
		CDHS	83.04.11	10.4000		UG/L
		CDHS	83.05.09	7.3000		UG/L
		CDHS	83.06.13	7.7000		UG/L
		CDHS	83.07.11	8.0000		UG/L
		CDHS	83.08.08	7.2000		UG/L
		CDHS	83.09.12	6.0000		UG/L
		CDHS	83.10.10	8.0000		UG/L
		CDHS	83.11.14	8.2000		UG/L
		CDHS	83.12.13	7.0000		UG/L
		CDHS	84.01.09	6.7000		UG/L
		CDHS	84.02.13	10.3000		UG/L
		CDHS	84.03.12	8.9000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
71903093	TRICHLOROETHYLENE	CDHS	84.04.09	10.5000		UG/L
		CDHS	84.05.14	8.8000		UG/L
		CDHS	84.06.11	9.5000		UG/L
		CDHS	84.08.14	10.3000		UG/L
		CDHS	84.09.10	11.0000		UG/L
		CDHS	84.10.08	13.3000		UG/L
		CDHS	84.11.13	13.5000		UG/L
		CDHS	85.01.14	5.2000		UG/L
		CDHS	85.02.11	14.3000		UG/L
		JMM LAB	85.02.19	76.0000		UG/L
		CDHS	85.03.15	31.0000		UG/L
		CDHS	85.03.18	14.1000		UG/L
		CDHS	85.03.29	37.0000		UG/L
		JMM LAB	85.04.25	17.0000		UG/L
		CDHS	85.05.14	38.0000		UG/L
81902525	1,1,1-TRICHLOROETHANE	JMM LAB	85.04.25	2.5000		UG/L
	1,1-DICHLOROETHYLENE	CDHS	85.04.15	0.4500	L	UG/L
		CDHS	85.04.17	0.3900	L	UG/L
		JMM LAB	85.04.25	1.3000		UG/L
		CDHS	85.05.14	0.6200	L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.22	0.0000		
		JMM LAB	85.04.25	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.22	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.22	0.0000		
	CIS-1,2-DICHLOROETHYLENE	CDHS	85.04.15	2.1000		UG/L
	PERCHLOROETHYLENE	CDHS	81.07.15	1.0000		UG/L
		CDHS	82.05.19	1.2000		UG/L
		CDHS	82.07.12	5.7000		UG/L
		JMM LAB	85.01.22	1.1000		UG/L
		CDHS	85.04.15	1.6000		UG/L
		CDHS	85.04.17	1.6000		UG/L
		JMM LAB	85.04.25	1.8000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.2100		UG/L
		CDHS	81.07.15	0.9800		UG/L
		CDHS	82.05.19	1.7000		UG/L
		JMM LAB	85.01.22	5.4000		UG/L
		CDHS	85.04.15	1.9000		UG/L
		CDHS	85.04.17	1.9000		UG/L
		JMM LAB	85.04.25	12.0000		UG/L
81902635	CARBON TETRACHLORIDE	CDHS	80.09.04	0.0500	L	UG/L
		CDHS	82.05.17	1.7000		UG/L
	PERCHLOROETHYLENE	CDHS	80.03.12	10.0000		UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
81902635	PERCHLOROETHYLENE	CDHS	80.04.08	6.2000		UG/L
		CDHS	80.04.10	9.4000		UG/L
		CDHS	80.04.14	8.6000		UG/L
		CDHS	80.04.17	7.8000		UG/L
		CDHS	80.06.16	15.8000		UG/L
		CDHS	80.09.04	9.6000		UG/L
		CDHS	82.05.17	7.7000		UG/L
		CDHS	82.05.19	6.5000		UG/L
		CDHS	82.05.26	6.3000		UG/L
		CDHS	82.07.12	9.5000		UG/L
		CDHS	82.07.13	9.8000		UG/L
		CDHS	82.07.21	15.0000		UG/L
		CDHS	84.08.30	7.0000		UG/L
		CDHS	84.09.04	7.7000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	13.0000		UG/L
		CDHS	80.01.15	8.5000		UG/L
		CDHS	80.01.17	12.0000		UG/L
		CDHS	80.03.12	17.0000		UG/L
		CDHS	80.04.08	8.4000		UG/L
		CDHS	80.04.10	14.0000		UG/L
		CDHS	80.04.14	11.0000		UG/L
		CDHS	80.04.17	14.0000		UG/L
		CDHS	80.06.16	12.9000		UG/L
		CDHS	80.06.23	15.0000		UG/L
		CDHS	80.09.04	11.0000		UG/L
		CDHS	82.05.17	6.9000		UG/L
		CDHS	82.05.19	5.9000		UG/L
		CDHS	82.05.26	5.4000		UG/L
		CDHS	82.07.13	8.0000		UG/L
		CDHS	82.07.21	12.0000		UG/L
91901437	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.19	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.19	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.19	0.0000		
	CARBON TETRACHLORIDE	CDHS	80.09.04	0.0600		UG/L
		CDHS	81.01.12	0.1000	L	UG/L
		CDHS	81.07.15	0.2100		UG/L
		JMM LAB	85.02.19	2.0000		UG/L
	PERCHLOROETHYLENE	CDHS	80.02.26	2.3000		UG/L
		CDHS	80.03.10	1.1000		UG/L
		CDHS	80.04.08	0.5800		UG/L
		CDHS	80.04.10	0.4200		UG/L
		CDHS	80.04.14	0.3000		UG/L
		CDHS	80.04.17	0.3100		UG/L
		CDHS	80.08.01	1.0000		UG/L
		CDHS	80.09.04	0.5100		UG/L
		CDHS	81.01.12	0.3400		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
91901437	PERCHLOROETHYLENE	CDHS	81.07.15	1.1000		UG/L
		JMM LAB	85.02.19	3.9000		UG/L
		CDHS	85.03.15	2.8000		UG/L
		CDHS	85.03.22	3.0000		UG/L
		CDHS	85.03.29	2.8000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	28.0000		UG/L
		CDHS	80.01.14	30.0000		UG/L
		CDHS	80.01.15	14.1000		UG/L
		CDHS	80.01.22	1.6000		UG/L
		CDHS	80.02.26	24.0000		UG/L
		CDHS	80.03.10	13.0000		UG/L
		CDHS	80.04.08	4.8000		UG/L
		CDHS	80.04.09	3.0000		UG/L
		CDHS	80.04.10	4.1000		UG/L
		CDHS	80.04.14	2.8000		UG/L
		CDHS	80.04.17	3.5000		UG/L
		CDHS	80.07.01	5.0000	L	UG/L
		CDHS	80.08.01	15.0000		UG/L
		CDHS	80.08.11	0.5000		UG/L
		CDHS	80.09.04	5.6000		UG/L
		CDHS	80.09.08	3.7000		UG/L
		CDHS	80.10.06	21.4000		UG/L
		CDHS	80.11.03	8.6000		UG/L
		CDHS	80.12.01	17.0000		UG/L
		CDHS	81.01.05	3.7000		UG/L
		CDHS	81.01.12	3.2000		UG/L
		CDHS	81.02.02	17.1000		UG/L
		CDHS	81.03.26	15.7000		UG/L
		CDHS	81.04.13	16.9000		UG/L
		CDHS	81.05.05	15.8000		UG/L
		CDHS	81.06.15	15.1000		UG/L
		CDHS	81.07.15	10.6000		UG/L
		CDHS	81.07.27	6.3000		UG/L
		CDHS	81.08.17	16.2000		UG/L
		CDHS	81.09.21	5.8000		UG/L
		CDHS	81.10.12	7.9000		UG/L
		CDHS	81.11.16	12.4000		UG/L
		CDHS	82.02.22	6.3000		UG/L
		CDHS	82.03.22	12.5000		UG/L
		CDHS	82.04.26	11.8000		UG/L
		CDHS	82.07.07	3.0000		UG/L
		CDHS	82.07.21	1.7900		UG/L
		CDHS	82.08.23	1.9000		UG/L
		CDHS	82.09.27	5.1000		UG/L
		CDHS	82.10.25	1.7000		UG/L
		CDHS	82.11.22	5.9000		UG/L
		CDHS	82.12.27	4.3000		UG/L
		CDHS	83.01.24	2.4000		UG/L
		CDHS	83.02.14	1.7000		UG/L
		CDHS	83.03.28	0.0600		UG/L
		CDHS	83.04.25	0.1000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
91901437	TRICHLOROETHYLENE	CDHS	83.05.23	0.3000		UG/L
		CDHS	83.06.27	1.0000		UG/L
		CDHS	83.07.25	2.5000		UG/L
		CDHS	83.08.22	0.8000		UG/L
		CDHS	83.09.26	1.3000		UG/L
		CDHS	83.10.17	2.1000		UG/L
		CDHS	83.11.28	1.4000		UG/L
		CDHS	83.12.29	10.0000		UG/L
		CDHS	84.01.09	4.0000		UG/L
		CDHS	84.01.23	10.1000		UG/L
		CDHS	84.02.27	2.1000		UG/L
		CDHS	84.03.26	2.3000		UG/L
		CDHS	84.04.23	2.6000		UG/L
		CDHS	84.05.29	3.1000		UG/L
		CDHS	84.06.25	3.7000		UG/L
		CDHS	84.08.27	2.8000		UG/L
		CDHS	84.09.24	2.5000		UG/L
		CDHS	84.10.29	16.9000		UG/L
		CDHS	84.11.27	18.9000		UG/L
		CDHS	84.12.17	14.5000		UG/L
		CDHS	85.01.28	20.5000		UG/L
		JMM LAB	85.02.19	37.0000		UG/L
		CDHS	85.02.25	18.2000		UG/L
		CDHS	85.03.15	3.1000		UG/L
		CDHS	85.03.18	15.3000		UG/L
		CDHS	85.03.22	3.1000		UG/L
		CDHS	85.03.29	3.0000		UG/L
91901439	1,2-DICHLOROETHANE	JMM LAB	85.02.19	2.1000		UG/L
		CDHS	85.03.22	1.0000	L	UG/L
		CDHS	85.04.12	0.9500	L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.19	0.0000		
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.19	0.0000		
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.19	0.0000		
	CARBON TETRACHLORIDE	JMM LAB	85.02.19	0.9000		UG/L
	CHLOROFORM	JMM LAB	85.02.19	0.8000		UG/L
	PERCHLOROETHYLENE	CDHS	80.09.26	0.1000		UG/L
		CDHS	83.12.20	1.2000		UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	0.2600		UG/L
		CDHS	80.09.26	0.5100		UG/L
		CDHS	80.12.16	0.5800		UG/L
		CDHS	81.07.15	0.6300		UG/L
		CDHS	83.12.20	2.6000		UG/L
		CDHS	84.01.25	5.7000		UG/L
		CDHS	84.02.27	3.1000		UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
91901439	TRICHLOROETHYLENE	CDHS	84.03.26	1.4000	UG/L
		CDHS	84.05.29	2.7000	UG/L
		CDHS	84.06.25	4.7000	UG/L
		CDHS	84.08.27	3.0000	UG/L
		CDHS	84.10.29	4.5000	UG/L
		JMM LAB	85.02.19	12.0000	UG/L
		CDHS	85.03.15	5.0000	UG/L
		CDHS	85.03.18	3.9000	UG/L
		CDHS	85.03.22	8.2000	UG/L
		CDHS	85.03.29	6.7000	UG/L
		CDHS	85.04.12	9.7000	UG/L
		CDHS	85.05.29	4.6000	UG/L
		CDHS	85.06.24	5.8000	UG/L
91901440	1,1-DICHLOROETHYLENE	CDHS	85.03.29	0.2000 L	UG/L
		CDHS	85.04.15	0.2000 L	UG/L
	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.02.19	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.02.19	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.02.19	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.01.12	0.0500 L	UG/L
		CDHS	80.10.22	0.1000 L	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.07.13	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.01.12	0.2000	UG/L
		CDHS	80.03.10	0.1300	UG/L
		CDHS	80.08.01	0.0500	UG/L
		CDHS	80.10.22	0.1000 L	UG/L
		CDHS	81.01.12	4.4000	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.07.13	0.2000	UG/L
		JMM LAB	85.02.19	9.4000	UG/L
		CDHS	85.03.15	1.4000	UG/L
		CDHS	85.03.29	1.2000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.11	1.1000	UG/L
		CDHS	80.01.12	0.1300	UG/L
		CDHS	80.01.23	1.3000	UG/L
		CDHS	80.03.10	1.4000	UG/L
		CDHS	80.08.01	0.4400	UG/L
		CDHS	80.10.22	0.5300	UG/L
		CDHS	81.01.12	9.2000	UG/L
		CDHS	81.07.15	0.2800	UG/L
		CDHS	82.07.13	1.0300	UG/L
		JMM LAB	85.02.19	10.0000	UG/L
		CDHS	85.03.15	2.3000	UG/L
		CDHS	85.03.29	2.4000	UG/L

LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
A1900749	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.31	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.31	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.31	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.09.04	0.0500 L	UG/L
		CDHS	81.03.30	0.2900	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.01.26	0.1000 L	UG/L
	M,P-XYLENE	JMM LAB	85.01.31	0.3000	UG/L
	O-XYLENE	JMM LAB	85.01.31	0.2000	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.13	0.6100	UG/L
		CDHS	80.04.08	0.7900	UG/L
		CDHS	80.04.10	1.0000	UG/L
		CDHS	80.04.14	0.7300	UG/L
		CDHS	80.04.17	0.8400	UG/L
		CDHS	80.05.01	1.0000	UG/L
		CDHS	80.09.04	0.6200	UG/L
		CDHS	81.03.30	0.3200	UG/L
		CDHS	81.07.15	0.5900	UG/L
		CDHS	82.01.26	1.2000	UG/L
		CDHS	82.07.13	1.2000	UG/L
		JMM LAB	85.01.31	2.2000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	14.0000	UG/L
		CDHS	80.01.10	15.0000	UG/L
		CDHS	80.01.14	9.5000	UG/L
		CDHS	80.01.15	2.8000	UG/L
		CDHS	80.01.23	1.7000	UG/L
		CDHS	80.01.29	2.1000	UG/L
		CDHS	80.01.31	0.8500	UG/L
		CDHS	80.02.04	1.1000	UG/L
		CDHS	80.02.06	6.5000	UG/L
		CDHS	80.02.13	12.0000	UG/L
		CDHS	80.04.08	8.4000	UG/L
		CDHS	80.04.10	9.0000	UG/L
		CDHS	80.04.14	9.2000	UG/L
		CDHS	80.04.17	9.7000	UG/L
		CDHS	80.05.01	12.0000	UG/L
		CDHS	80.06.16	9.9000	UG/L
		CDHS	80.06.23	7.3000	UG/L
		CDHS	80.07.01	7.2000	UG/L
		CDHS	80.09.04	4.5000	UG/L
		CDHS	80.09.29	4.5000	UG/L
		CDHS	80.10.06	13.6000	UG/L
		CDHS	80.11.19	8.4000	UG/L
		CDHS	80.12.01	15.2000	UG/L
		CDHS	81.01.05	12.0000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
A1900749	TRICHLOROETHYLENE	CDHS	81.02.12	10.2000	UG/L
		CDHS	81.02.17	13.0000	UG/L
		CDHS	81.02.18	14.4000	UG/L
		CDHS	81.02.19	15.2000	UG/L
		CDHS	81.03.04	13.5000	UG/L
		CDHS	81.03.05	13.5000	UG/L
		CDHS	81.03.11	12.5000	UG/L
		CDHS	81.03.30	12.0000	UG/L
		CDHS	81.04.15	11.8000	UG/L
		CDHS	81.04.29	11.6000	UG/L
		CDHS	81.05.06	9.7000	UG/L
		CDHS	81.05.07	11.5000	UG/L
		CDHS	81.05.14	13.3000	UG/L
		CDHS	81.05.27	9.8000	UG/L
		CDHS	81.05.28	11.1000	UG/L
		CDHS	81.06.10	10.3000	UG/L
		CDHS	81.06.17	7.8000	UG/L
		CDHS	81.07.02	9.8000	UG/L
		CDHS	81.07.13	12.7000	UG/L
		CDHS	81.07.15	9.4000	UG/L
		CDHS	81.08.03	19.2000	UG/L
		CDHS	81.09.08	12.9000	UG/L
		CDHS	81.10.06	8.7000	UG/L
		CDHS	81.11.02	9.4000	UG/L
		CDHS	81.12.07	8.4000	UG/L
		CDHS	82.01.04	11.0000	UG/L
		CDHS	82.01.26	7.5000	UG/L
		CDHS	82.02.01	5.5000	UG/L
		CDHS	82.03.01	5.3000	UG/L
		CDHS	82.04.05	1.6000	UG/L
		CDHS	82.05.04	6.6000	UG/L
		CDHS	82.06.01	6.9000	UG/L
		CDHS	82.07.07	8.4000	UG/L
		CDHS	82.07.13	9.3000	UG/L
		CDHS	82.08.03	9.7000	UG/L
		CDHS	82.09.08	6.9000	UG/L
		CDHS	82.10.04	1.0000	UG/L
		CDHS	82.11.01	10.8000	UG/L
		CDHS	82.11.06	2.3000	UG/L
		CDHS	83.01.03	6.3000	UG/L
		CDHS	83.02.07	4.0000	UG/L
		CDHS	83.03.07	6.2000	UG/L
		CDHS	83.05.02	9.2000	UG/L
		CDHS	83.06.06	7.3000	UG/L
		CDHS	83.07.05	7.0000	UG/L
		CDHS	83.08.01	7.9000	UG/L
		CDHS	83.09.06	5.1000	UG/L
		CDHS	83.10.03	3.0000	UG/L
		CDHS	83.11.07	5.9000	UG/L
		CDHS	83.12.05	2.7000	UG/L
		CDHS	84.01.03	3.4000	UG/L
		CDHS	84.02.06	7.1000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
A1900749	TRICHLOROETHYLENE	CDHS	84.03.05	5.8000	UG/L
		CDHS	84.04.02	5.2000	UG/L
		CDHS	84.05.07	5.5000	UG/L
		CDHS	84.06.04	4.9000	UG/L
		CDHS	84.08.06	4.4000	UG/L
		CDHS	84.09.04	4.9000	UG/L
		JMM LAB	85.01.31	16.0000	UG/L
A1901622	PERCHLOROETHYLENE	CDHS	84.11.08	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	80.03.05	0.1000 L	UG/L
		CDHS	83.06.15	0.5000 L	UG/L
		CDHS	84.11.08	0.1000 L	UG/L
A1902032	PERCHLOROETHYLENE	CDHS	80.04.08	2.2000	UG/L
	TRICHLOROETHYLENE	CDHS	80.04.08	17.0000	UG/L
A1902518	CARBON TETRACHLORIDE	CDHS	82.07.20	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	81.09.03	0.1000 L	UG/L
		CDHS	82.07.20	0.1000 L	UG/L
	TRICHLOROETHYLENE	CDHS	81.09.03	0.1000 L	UG/L
		CDHS	82.07.20	0.2400 L	UG/L
A1902713	PERCHLOROETHYLENE	CDHS	81.07.15	0.2400	UG/L
A1902857	EPA METHOD 624--COMPOUNDS D	JMM LAB	85.01.31	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.31	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.31	0.0000	
	CARBON TETRACHLORIDE	CDHS	80.09.04	0.0500 L	UG/L
		CDHS	81.03.18	0.1000 L	UG/L
		CDHS	81.07.15	0.1000 L	UG/L
		CDHS	82.01.26	0.1000 L	UG/L
	PERCHLOROETHYLENE	CDHS	80.02.13	0.2600	UG/L
		CDHS	80.04.08	0.2000	UG/L
		CDHS	80.04.10	0.4600	UG/L
		CDHS	80.04.14	0.4000	UG/L
		CDHS	80.04.17	0.4300	UG/L
		CDHS	80.09.04	0.4000	UG/L
		CDHS	81.03.18	0.2400	UG/L
		CDHS	81.07.15	0.2900	UG/L
		CDHS	82.01.26	0.4300	UG/L
		CDHS	82.07.13	0.4700	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	4.0000	UG/L
		CDHS	80.01.10	7.0000	UG/L

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A1902857	TRICHLOROETHYLENE	CDHS	80.01.14	14.0000	UG/L
		CDHS	80.01.15	9.0000	UG/L
		CDHS	80.01.22	20.0000	UG/L
		CDHS	80.01.29	5.7000	UG/L
		CDHS	80.02.04	18.0000	UG/L
		CDHS	80.02.13	18.0000	UG/L
		CDHS	80.04.08	5.2000	UG/L
		CDHS	80.04.10	15.0000	UG/L
		CDHS	80.04.14	14.0000	UG/L
		CDHS	80.04.17	16.0000	UG/L
		CDHS	80.06.16	3.3000	UG/L
		CDHS	80.06.23	8.9000	UG/L
		CDHS	80.07.01	14.6000	UG/L
		CDHS	80.07.30	9.3000	UG/L
		CDHS	80.08.11	6.8000	UG/L
		CDHS	80.09.04	14.0000	UG/L
		CDHS	80.09.08	21.0000	UG/L
		CDHS	80.11.19	10.6000	UG/L
		CDHS	80.12.01	25.0000	UG/L
		CDHS	81.01.05	14.8000	UG/L
		CDHS	81.02.20	21.7000	UG/L
		CDHS	81.03.06	16.7000	UG/L
		CDHS	81.03.10	20.5000	UG/L
		CDHS	81.03.13	17.8000	UG/L
		CDHS	81.03.18	18.0000	UG/L
		CDHS	81.04.27	21.6000	UG/L
		CDHS	81.04.29	18.1000	UG/L
		CDHS	81.05.04	17.2000	UG/L
		CDHS	81.05.06	16.4000	UG/L
		CDHS	81.05.07	18.8000	UG/L
		CDHS	81.05.14	23.1000	UG/L
		CDHS	81.05.15	19.0000	UG/L
		CDHS	81.05.18	18.2000	UG/L
		CDHS	81.05.20	16.5000	UG/L
		CDHS	81.05.22	19.2000	UG/L
		CDHS	81.05.26	14.7000	UG/L
		CDHS	81.05.28	15.0000	UG/L
		CDHS	81.06.02	14.9000	UG/L
		CDHS	81.06.17	11.2000	UG/L
		CDHS	81.07.02	11.6000	UG/L
		CDHS	81.07.13	15.1000	UG/L
		CDHS	81.07.15	11.0000	UG/L
		CDHS	81.08.03	14.2000	UG/L
		CDHS	81.09.08	11.4000	UG/L
		CDHS	81.10.06	9.5000	UG/L
		CDHS	81.11.02	12.2000	UG/L
		CDHS	81.12.07	1.3000	UG/L
		CDHS	82.01.18	10.4000	UG/L
		CDHS	82.01.26	9.4000	UG/L
		CDHS	82.02.01	8.7000	UG/L
		CDHS	82.03.01	8.4000	UG/L
		CDHS	82.04.05	7.8000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
A1902857	TRICHLOROETHYLENE	CDHS	82.05.04	8.7000	UG/L
		CDHS	82.06.01	8.2000	UG/L
		CDHS	82.07.07	9.5000	UG/L
		CDHS	82.07.13	1.0000	UG/L
		CDHS	82.08.03	9.8000	UG/L
		CDHS	82.09.08	2.9000	UG/L
		CDHS	82.10.04	6.2000	UG/L
		CDHS	82.11.01	7.6000	UG/L
		CDHS	82.11.06	5.8000	UG/L
		CDHS	83.01.03	4.8000	UG/L
		CDHS	83.02.07	5.4000	UG/L
		CDHS	83.03.07	6.3000	UG/L
		CDHS	83.04.04	4.6000	UG/L
		CDHS	83.05.02	3.5000	UG/L
		CDHS	83.06.06	5.0000	UG/L
		CDHS	83.07.05	2.5000	UG/L
		CDHS	83.08.01	4.7000	UG/L
		CDHS	83.09.06	4.1000	UG/L
		CDHS	83.10.03	2.0000	UG/L
		CDHS	83.11.07	5.3000	UG/L
		CDHS	83.12.05	5.4000	UG/L
		CDHS	84.01.03	2.7000	UG/L
		CDHS	84.02.06	3.3000	UG/L
		CDHS	84.03.05	2.8000	UG/L
		CDHS	84.04.02	3.6000	UG/L
		CDHS	84.05.07	5.5000	UG/L
		CDHS	84.06.04	3.8000	UG/L
		CDHS	84.08.06	3.8000	UG/L
		CDHS	84.09.04	3.9000	UG/L
		JMM LAB	85.01.31	4.0000	UG/L
A1902946	EPA METHOD 624--NO COMPOUND	JMM LAB	85.01.31	0.0000	
	EPA METHOD 625--NO COMPOUND	JMM LAB	85.01.31	0.0000	
	AGRICULTURAL CHEMICALS--NON	JMM LAB	85.01.31	0.0000	
	TRICHLOROETHYLENE	CDHS	80.01.08	0.0200	UG/L
		CDHS	80.01.11	0.0200	UG/L
		CDHS	80.12.16	0.2600	UG/L
A1903103	PERCHLOROETHYLENE	CDHS	81.07.15	0.2000	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.10	0.1500	UG/L
		CDHS	81.07.15	0.3600	UG/L
A8000052	PERCHLOROETHYLENE	CDHS	81.01.13	0.0600	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.12	0.2100	UG/L
A8000065	CARBON TETRACHLORIDE	CDHS	82.01.26	0.1000 L	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE	UNITS
A8000065	PERCHLOROETHYLENE	CDHS	80.04.08	0.2800	UG/L
		CDHS	80.05.01	0.5000	UG/L
		CDHS	80.05.02	0.4000	UG/L
		CDHS	80.05.05	0.5000	UG/L
		CDHS	82.01.26	0.3700	UG/L
		CDHS	82.07.13	0.3700	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	14.0000	UG/L
		CDHS	80.01.10	18.0000	UG/L
		CDHS	80.01.14	7.8000	UG/L
		CDHS	80.01.31	4.9000	UG/L
		CDHS	80.02.04	10.0000	UG/L
		CDHS	80.02.06	4.0000	UG/L
		CDHS	80.04.08	12.0000	UG/L
		CDHS	80.05.01	11.1000	UG/L
		CDHS	80.05.02	13.3000	UG/L
		CDHS	80.05.05	11.6000	UG/L
		CDHS	80.06.16	9.8000	UG/L
		CDHS	80.06.23	15.6000	UG/L
		CDHS	80.07.01	15.7000	UG/L
		CDHS	80.11.03	17.5000	UG/L
		CDHS	81.01.05	11.5000	UG/L
		CDHS	81.06.17	8.7000	UG/L
		CDHS	81.09.28	14.5000	UG/L
		CDHS	81.10.19	9.9000	UG/L
		CDHS	81.11.09	15.4000	UG/L
		CDHS	81.12.07	8.1000	UG/L
		CDHS	82.01.04	14.0000	UG/L
		CDHS	82.01.26	9.5000	UG/L
		CDHS	82.02.01	8.9000	UG/L
		CDHS	82.03.01	7.7000	UG/L
		CDHS	82.04.05	8.0000	UG/L
		CDHS	82.05.04	7.8000	UG/L
		CDHS	82.06.01	8.1000	UG/L
		CDHS	82.07.07	9.5000	UG/L
		CDHS	82.07.13	9.8000	UG/L
		CDHS	82.08.03	10.4000	UG/L
		CDHS	82.09.08	7.1000	UG/L
		CDHS	82.10.04	6.6000	UG/L
		CDHS	82.11.01	9.4000	UG/L
		CDHS	82.11.06	7.7000	UG/L
		CDHS	83.01.03	5.6000	UG/L
		CDHS	83.02.07	6.3000	UG/L
		CDHS	83.03.21	7.8000	UG/L
		CDHS	83.04.04	6.6000	UG/L
		CDHS	83.05.02	6.1000	UG/L
		CDHS	83.06.06	6.0000	UG/L
		CDHS	83.07.05	6.0000	UG/L
		CDHS	83.08.01	6.7000	UG/L
		CDHS	83.09.06	4.6000	UG/L
		CDHS	83.10.03	3.4000	UG/L
		CDHS	83.11.14	7.3000	UG/L

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LOCATION	PARAMETER	LAB	DATE	VALUE		UNITS
A8000065	TRICHLOROETHYLENE	CDHS	83.12.05	5.4000		UG/L
		CDHS	84.01.03	3.6000		UG/L
		CDHS	84.02.06	6.0000		UG/L
		CDHS	84.03.05	6.0000		UG/L
		CDHS	84.04.02	5.9000		UG/L
		CDHS	84.05.07	5.8000		UG/L
		CDHS	84.06.04	5.6000		UG/L
		CDHS	84.08.06	5.3000		UG/L
		CDHS	84.09.04	4.8000		UG/L
A8000067	EPA METHOD 624--NO COMPOUND	S3D	85.05.09	0.0000		
	EPA METHOD 625--NO COMPOUND	S3D	85.05.09	0.0000		
A8000069	CARBON TETRACHLORIDE	CDHS	81.09.02	0.1000	L	UG/L
		CDHS	82.07.02	0.5000	L	UG/L
		CDHS	82.07.21	0.1000	L	UG/L
	PERCHLOROETHYLENE	CDHS	81.09.02	0.1000	L	UG/L
		CDHS	82.07.02	0.5000	L	UG/L
		CDHS	82.07.21	0.1000	L	UG/L
		CDHS	84.11.08	0.1000	L	UG/L
	TRICHLOROETHYLENE	CDHS	80.01.08	0.0100	L	UG/L
		CDHS	81.09.02	0.1000	L	UG/L
		CDHS	82.07.02	0.5000	L	UG/L
		CDHS	82.07.21	0.1000	L	UG/L
		CDHS	83.06.15	0.5000		UG/L
		CDHS	84.11.08	0.1000	L	UG/L
A8000077	TRICHLOROETHYLENE	CDHS	83.06.15	1.0000		UG/L
		CDHS	84.11.08	0.5300		UG/L